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## JUDGMENT.<sup>1</sup>

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### II.

#### IV. CONSTITUENTS OF THE JUDGMENT.

##### A.—THE CONSTRUCTION.

(1) *Its General Nature.*—Our result so far is that we judge when, in, or as a result of, apprehension, we set up as identical with the real a construction distinct from it. I propose next to examine the various constituents of the judgment, beginning with the construction.

It might seem natural, particularly if we are thinking in terms of a simple illustration, to suppose that the construction is a mental image. That this is not always the case, however, is obvious from the fact that we frequently identify with the real something of which we cannot form an image. If we interpret mental image on the analogy of a physical image, as a mental copy of the original object, the construction can never be a mental image, for we never identify an object with a copy of it. If by a mental image we mean, not a mental copy of which we are aware, but a peculiar type of awareness of the original, distinct both from perceiving and also from thinking, the construction will necessarily involve imagery when, owing to its sensuous complexity, we cannot otherwise grasp that which we identify with the real. For instance, without imagery we cannot form anything like an adequate conception of what a face, a picture, or a landscape looks like. But as a rule the imagery which accompanies thought is not essential; at most it illustrates our meaning. In any case, to say that the construction is a mental image only tells us that we are aware of it in this peculiar way; it does not tell us what it is that we are thus aware of.

Bosanquet's contention, with reference to a particular instance, that there is no judgment until the meaning of the image is treated as a further fact beyond the image itself, suggests

<sup>1</sup> Presidential Address delivered at the Tenth Annual Meeting of the Australasian Association of Psychology and Philosophy, University of Sydney, 19th August, 1932.

that where an image is involved the construction is the meaning of the image. Both he and Bradley maintain generally that the construction is the meaning of a psychical fact. Regarded as an explanation of the nature of the construction, however, this statement proves futile. It really only tells us that there is a psychical fact which means the construction. That does not of itself give us any information as to the nature of the construction. It would, however, assist us to arrive at the nature of the construction, if the psychical fact meant the construction in the sense that it was a clue to it or symptom of it. We must, in this connection, distinguish sharply, and to a certain extent contrary to common usage, between a clue or symptom, on the one hand, and a sign or symbol, on the other. For though both mean something, the one (the latter) does so naturally, the other (the former) only conventionally. A sign or symbol is something *designed or used* to mean or signify something else, *e.g.*,  $\pi$  to signify the ratio between the diameter and the circumference of a circle. A clue or symptom is something which is *found* to signify something else, *e.g.*, sea-gulls coming inland indicates an approaching storm.<sup>1</sup> The important difference between the two, so far as we are concerned, is that, whereas in the case of the sign the meaning is primary, in the case of the symptom it is secondary. In the former case, we first have the meaning and then choose a sign to symbolize it; in the latter case we first have the symptom (or fact which when its significance is discovered becomes a symptom) and have then to look for its meaning. Now if psychical fact means the construction, it might be either the sign or the symptom of this. If it were the sign of the construction, the statement that the construction is the meaning of a psychical fact would tell us absolutely nothing as to the nature of the construction. (So far as I know, however, no one would maintain that the psychical fact is the sign of the construction. Bradley, it is true, says that all ideas are signs,<sup>2</sup> but he does not distinguish between signs and symptoms.) If, on the other hand, the psychical fact is the symptom of the construction, the statement indicates that we must examine, or consider the significance of, the psychical fact in order to arrive at the nature of the construction. This, I gather, is the view of Bradley and Bosanquet. Thus, Bradley tells us that the meaning of the psychical fact is part of its content, used without regard to the rest or its existence.<sup>3</sup> According to Bosanquet, the meaning of a psychical fact is its content used to qualify something else.<sup>4</sup> They

<sup>1</sup> This distinction is not blurred by the fact that what to one person is or was a sign or symbol, to another may be a clue or symptom. *E.g.*, an inscription in an ancient language was a sign to the inscriber, but may be a clue to the archaeologist.

<sup>2</sup> *Cf.* "Principles of Logic", 2nd Ed., p. 5.

<sup>3</sup> "Principles of Logic", Ch. I.

<sup>4</sup> "Logic", 2nd Ed., Vol. 2, Ch. 10.



would say, for instance, that redness belongs to the content of the sensation of red, but is used to qualify the red object. In virtue of this fact the sensation means the redness of the object. This is also Stout's view. "Present sensation", he says, "originally 'means' for the percipient corresponding characters of the physical object".<sup>1</sup> This implies that, starting with the sensation, we find that this signifies the presence of a certain character in the physical object, or, in other words, that the sensation is a symptom of the fact that the object has this character.

This view, however, misrepresents the facts. We are not first aware of a psychical fact, and then interpret that as meaning a quality of the object. We are directly aware of the quality of the object. This awareness, however, is itself an event occurring at a certain moment in the percipient's mental history; in other words, it is a psychical fact. If we wish to distinguish this act of awareness from others, we do so by reference to that of which it is the awareness. That is to say, the fact that it is awareness of this character is used to characterize the psychical event. The same character which properly qualifies the object is also used to qualify the psychical event. But it qualifies the two in different ways. In terms of our previous illustration, the object *is* red, but the sensation is *of* red. I express this difference by saying that the character qualifies the object factually, but the sensation functionally; it is the function of the sensation to be aware of the character. Now, in the nature of things, the factual qualification is necessarily primary. It is only in that we are aware of the character as qualifying the object factually that the character qualifies our awareness functionally. That is to say, we are not first aware of the character of the sensation, and then use the same character to qualify the object, but precisely the reverse; we are directly aware of the character as qualifying the object, but use it (when our interest is in the mental history of the individual) to characterize the psychical fact. In other words, what is described as the meaning of the psychical fact is not arrived at by examining or considering the significance of the psychical fact, but is primary and used to characterize the psychical fact. Consequently, the description of it as the meaning of psychical fact tells us nothing as to its nature.

It does not seem, however, that any other description of the same kind will tell us anything further. It appears as though, so far as a general account of the nature of the construction is concerned, we will have to be satisfied with saying that the construction is what the real is thought of, or apprehended, as being. To gain further insight into its nature we must proceed

<sup>1</sup> "Manual of Psychology", 4th Ed., p. 412.

to analyse it. It is usual to analyse it into two constituents, subject and predicate.

(2) *Constituents of the Construction : Subject and Predicate.*—It is customary to define the subject as that about which something is said, the predicate as what is said about this.<sup>1</sup> Let us apply these definitions to the judgment "sugar is white". That about which something is being said is "sugar"; not the word, but the substance this stands for; and not about the whole nature of this, but about one aspect of it, its colour quality. What is said about this is not simply "white", but "that it is white". The subject, then, according to the natural interpretation of this definition, is some part or aspect of reality; the predicate is the construction which the judgment identifies with this. It is in this sense that Bradley and Bosanquet frequently, if not always, use the terms subject and predicate.

Subject and predicate as thus understood, however, do not represent constituents of the proposition, for it requires the whole verbal expression of the judgment to express each of them. This is obvious in the case of the construction. To express the construction we must repeat the whole proposition, but prefix a "that" which suspends its assertiveness. On the other hand, it might seem that the one word "sugar" suffices to indicate the subject. This, however, overlooks the fact that the construction is not identified with sugar as such, but with its colour quality. This is indicated by the words "is white". The symbolism of formal logic, and the theory of the syllogism, however, seems to imply that subject and predicate are constituents of the proposition. For instance, if we express "sugar is white" symbolically as S A P, or if it occurs as a premiss or the conclusion of a syllogism, we will naturally say that "sugar" represents the subject, "white" the predicate. Here the subject is that to which some character is ascribed, the predicate the character which is ascribed to this.

In thus deciding that sugar is subject and white predicate, however, we may be flouting the principle according to which many logicians<sup>2</sup> assert that the question as to what is subject and what predicate is to be decided. This is to be decided, they say, not, as in grammar, by the position of the words in the sentence, but by the placing of the stress or emphasis. The predicate is expressed by the word or words which are stressed, these being the words which convey the important information, or suffice to answer the question; the rest of the sentence expresses the subject. Thus Cooke Wilson contends that the

<sup>1</sup> Cf. Prof. Boyce Gibson's "Problem of Logic", p. 111.

<sup>2</sup> E.g., Prof. Boyce Gibson, H. W. B. Joseph, Cooke Wilson. Cf. respectively, "Problem of Logic", 116 ff., "An Introduction to Logic", 166 ff., "Statement and Inference", sects. 55-9.



subject "may be defined as what we were thinking about as we thought it, or conceived it, before we arrived at the statement, or before we had the statement communicated to us, while the predicate is the new fact which we state about it, or have communicated to us . . . In a sentence of the form 'A is B', the stress may fall upon either 'A' or 'B', or on the verb 'is', according as the statement answers the question, What is it that is B? or What is A? or Is A really B? and the analysis into subject and predicate is different in each case, while there is no exception to the rule that it is the predicate or predicative word that has the stress." Joseph gives the following concrete illustration.<sup>1</sup> "The proposition 'Belladonna dilates the pupil' may be an answer either to the question 'What dilates the pupil?' or 'What do you know of belladonna?' In either case the grammatical subject is belladonna; but the logical subject is in the former case 'dilating the pupil'; that is what we are thinking about, and about that the judgment informs us that belladonna will affect it; in the latter case the logical subject is belladonna, and about that the judgment informs us that it produces this effect." (166-7.)

According to the above discussion, then, there are three different ways in which, in logic, we may distinguish subject and predicate. I call these respectively the "logical", the "relational" and the "narrational" subject and predicate, and propose to consider them in turn.

(a) *The Logical Subject and Predicate.*—The logical subject is the part or aspect of reality with which the judgment identifies a construction; the logical predicate is the construction which is thus identified with the real. In speaking of these as the *logical* subject and predicate I do not mean to imply that they are the only subject and predicate which concern the logician, for we shall see that this is not the case. The title is, however, justified, for they are the only subject and predicate which cannot be modified without modifying the judgment. Both the relational subject and predicate, and also the narrational subject and predicate, represent the terms from which the construction is built up, and into which it can be analysed. Now, as we shall see, a construction can be built up and analysed in different ways. Consequently the relational and the narrational subject and predicate vary without modifying the construction, and therefore without modifying the judgment. If, on the other hand, you modify either the logical subject, *i.e.*, the part or aspect of the real with which you identify the construction, or the logical predicate, *i.e.*, the construction which you identify with it, you obviously get a different judgment. The distinction of the logical subject and predicate, however,

<sup>1</sup> Prof. Gibson's more elaborate illustration (Problems 116-7) is too long to quote.

represents an analysis, not of the construction, but of the judgment. The construction is one of the terms into which this is analysed. Our present concern with this distinction of subject and predicate, therefore, is only to distinguish it from those which do represent an analysis of the construction.

(b) *The Relational Subject and Predicate.*—The only possible analysis of the judgment as a whole is into the real and the construction which is identified with this, *i.e.*, into logical subject and predicate. Any further analysis of the judgment is possible only by analysing one or other of these terms. Consequently, in distinguishing the relational subject and predicate we are analysing, not the judgment as such, but its logical predicate, the construction. It follows that the distinction of the relational subject and predicate is not, as is usually supposed, an analysis of the proposition. For, as the proposition is the judgment as expressed in words, an analysis of it is at the same time an analysis of the judgment. That is to say, the only possible analysis of the proposition is into logical subject and predicate. But, though the distinction of the relational subject and predicate does not represent an analysis of the proposition, it is, nevertheless, the proposition in which the judgment is expressed which determines how the construction is to be analysed. For the same construction can be analysed, or (looking at the matter from the other side) built up, in different ways. Thus "A is greater than B" and "B is less than A" identify with the real precisely the same construction; this construction can be built up in or by means of either of these propositions. But though it is the same construction (for it identifies with the real precisely the same state of affairs), it is built up differently, and therefore must be analysed differently, in the two cases. The same proposition builds it up in one way only, and so, as built up in that proposition, it can be analysed into relational subject and predicate in one way only. To build up the same construction in another way, thus making it analysable into relational subject and predicate in a different way, another proposition is required.

The distinction of the relational subject and predicate, therefore, represents an analysis of the construction as built up in a particular proposition. The analysis, however, must be made solely from the point of view of the content of the construction. The analysis can also be made from the point of view of the order in which the various features of the construction become known. If, however, we analyse it from this point of view, we distinguish, not the relational, but the narrational, subject and predicate. Now the construction, as built up by the same proposition, can be analysed differently into narrational subject and predicate. Thus the analysis of the construction



set up by the proposition "A is greater than B" into narrational subject and predicate will vary according as it conveys, to a person already familiar with the size of A, information as to the size of B, or, to a person already familiar with the size of B, information as to the size of A. Its analysis into relational subject and predicate, however, will be the same in both cases, and will be determined solely by the nature of the relational complex in terms of which this proposition sets up the construction, or, in other words, by the content of the construction as built up in this proposition. We distinguish the relational subject and predicate, then, when we analyse, solely from the point of view of its content, the construction as built up by a particular proposition.

We said that the same construction can be analysed or built up in different ways by different propositions. How must propositions be related in order that they should set up the same construction? (i) The construction set up by any proposition is also set up by any strong educt from it. Thus  $Se\bar{P}$ ,  $\bar{P}eS$ , and  $\bar{P}a\bar{S}$  set up precisely the same construction, posit precisely the same state of affairs, as  $SaP$ . Weak educts, on the other hand, set up a part only of the construction set up by the proposition from which they are educed. (ii) The construction set up by any proposition is also set up by a proposition which sets forth the converse of the relational complex set forth by it. Thus, as we saw, B is less than A sets up the same construction as A is greater than B. This is true not only where the relation is named, but also where it is expressed in terms of qualification, and where it is expressed in terms of class-inclusion. Thus "redness is a quality of A" sets up precisely the same construction as "A is red"; "(the class) B includes A" sets up the same construction as "A is a (member of the class) B". Again, any strong educt from this proposition (*i.e.*, from the proposition which sets forth the converse of the relational complex set forth by the original proposition) will also set up the same construction.

It is apparent from the foregoing discussion that the construction is built up by relating two terms. That, however, does not mean that any two terms which stand in relation constitute a construction. They do so only if the relation is asserted. Thus, "the red rose" does not set up a construction, but "the rose is red" does, because, though the relation is the same in both cases, it is only in the latter case that it is asserted. It is the asserted relation which sets up or constitutes the construction. Of the two terms related by this relation, the one represents the relational subject, the other the relational predicate. But what determines which is which? It is determined by the form of the proposition which sets up the construction. The subject is the term which the form of the

proposition (or the manner in which it sets up the construction) indicates as being further specified; the predicate is the term which the form of the proposition indicates as supplying this further specification. If, where any relation (whether named as a relation or only indicated in some other way) is asserted to hold between two terms, we speak of the term from which the relation proceeds as the referent, and the term to which it proceeds as the relatum, then the subject is the referent and the predicate the relatum of the asserted relation which sets up the construction. In "A is greater than B" a named relation is asserted to hold between A and B, and this relation goes from A to B, thus further specifying A by reference to B. Consequently A is subject and B predicate. In "the rose is red", though no relation is named, nevertheless the relation of possessing a quality or attribute is asserted, and goes from the rose to red, thus further specifying the former by reference to the latter. Consequently the former is the subject, the latter the predicate. If, on the other hand, we say that redness is an attribute of the rose, the relation asserted is that of being a quality or attribute of something, and this goes from red to the rose. In this case, therefore, red is the subject which is further specified, the rose the predicate which supplies the further specification.

Though we spoke of another subject and predicate as the logical subject and predicate, the logician is vitally concerned with the relational subject and predicate. It is impossible to explain, without reference to these, the nature either of the construction which in the judgment is identified with the real or of inference. For the construction is set up by asserting that a certain relation holds between these terms, and it is only where relations of a certain kind hold between such terms that inference is possible. They are, for instance, the terms referred to in the Rules of the Syllogism.

(c) *The Narrational Subject and Predicate.*—This mode of distinguishing subject and predicate is distinct both from the logical, and also from the relational, mode of distinguishing them. As we saw, the analysis of a proposition into narrational subject and predicate varies according to the word (or words) stressed. The word or words stressed represent the predicate, the rest of the proposition the subject. Thus "Smith is a good skater" will be analysed into narrational subject and predicate in four different ways according as the stress falls on "Smith", "is", "good" or "skater". If "Smith" is stressed, this represents the predicate, and "is a good skater" the subject; if "is" is stressed, it will represent the predicate, the subject being represented by "Smith . . . a good skater"; and so on. But it is surely obvious that whichever word we stress, the proposition is true only if one and the same state of affairs exists.



In every case it is precisely the same construction which is identified with the real. The logical subject and predicate, therefore, remain the same, despite the variations in the narrational subject and predicate. Consequently the narrational mode of distinguishing subject and predicate must be independent of the logical mode of distinguishing them. It must also be distinct from the relational mode of distinguishing them. For, whatever word we stress, we are setting up the construction in precisely the same way, or in terms of precisely the same relational complex. It is true that the proposition can be interpreted as setting up different relational complexes; *e.g.*, as asserting that "Smith possesses the attribute indicated by the words 'good skater'", or that "Smith is a member of the class indicated by the words 'good skater'". But a difference in the stress does not indicate a difference in the interpretation required; we can adopt either interpretation whichever word is stressed. Variation of the stress, therefore, does not modify the relational complex set up by the proposition, and so does not involve any change in the analysis of the construction into relational subject and predicate. This analysis, therefore, is independent of its analysis into narrational subject and predicate. The former is determined solely by the nature of the relational complex set up by the proposition, the latter solely by the placing of the stress in the proposition, which in turn depends simply on the narrational circumstances.

Is the logician, then, concerned with the narrational subject and predicate? The answer depends on whether the logician is interested in the concrete process of thinking, in the manner in which the thought of a particular thinker or group of thinkers develops. If he is not interested in this, the distinction of narrational subject and predicate does not concern him.

#### B.—THE REAL.

In setting up the construction we necessarily identify it with the real. For, as we saw, there can be no construction without an asserted relation, and the assertion of the relation identifies the construction with the real. This real is conceived as a partial aspect of the one reality with which all our judgments are concerned; as an aspect of a system, with other aspects of which other judgments identify other constructions. It is only because it is thus conceived as an aspect of a system, which is in this way also known otherwise, that we regard it as real. For it is only because it is so conceived that we regard it as having a nature of its own which manifests itself beyond my present thought. The difference between the real and the construction is that, whereas the construction is wholly set up by my present thinking, the real has a nature of its own, according to which

it develops, which I apprehend, and which is liable (through sensation) to be forced upon my attention, but which also manifests itself beyond my present thought. I am aware of this difference only because I know that it is only one aspect of the same reality which I otherwise know. This knowledge in turn is possible (as Kant pointed out) only in virtue of the fact that I am aware that I (the same I) think my successive thoughts. This awareness as such does not involve any consciousness of the nature of my empirical ego (though no doubt it would in fact be impossible without this), but only of the identity of the thinker of my different thoughts.

It must not, however, be assumed that, because we speak of the logical subject as "the real", and maintain that it is an aspect of reality, we mean that it is real as opposed to an appearance, in any of the different senses in which these are contrasted. Obviously, according to Bradley's distinction of appearance and reality, the logical subject must be an appearance. If, on the other hand, we distinguish between what is real and what is only appearance in the way in which we ordinarily do, the logical subject may either be real or appearance. For what we ordinarily call an appearance, no less than what we ordinarily regard as real, is an aspect of reality. It is that aspect of reality which presents itself from a certain point of view, or under certain conditions, which we regard as abnormal. The fact that its logical subject is an appearance does not imply that the judgment must be false, nor on the other hand that it must be true. It is true if the construction which it identifies with this appearance is identical with it; otherwise it is false. The fact that the logical subject is an appearance makes the judgment false only if it sets up, as identical with this appearance, a construction which in fact is identical with something real. We are, however, more likely to fall into error by identifying with something real a construction which in fact is identical with an appearance. In any case, what determines whether a judgment is true or false is not whether the logical subject is real or only an appearance, but whether this (whether real or an appearance) is identical with the construction which is identified with it. How do we determine whether it is?

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## A LIBERAL EDUCATION AND THE QUALIFICATIONS FOR ENTRANCE TO THE UNIVERSITY.<sup>1</sup>

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AMID the many conflicting views which have been expressed regarding the state of education in this country, one fact seems to be generally admitted, namely, that all is not well with our present system. Opinions differ, however, as to where the fault lies and what is the appropriate remedy.

The curriculum of our secondary schools is to a large extent dominated by the requirements for entrance to the University, whether through the leaving certificate or through the University matriculation examination. It is a matter for discussion as to how far this is desirable, but at first sight it seems hardly right or justifiable, considering that only a small proportion of those who attend the secondary schools are destined to proceed to the University. There would perhaps be fewer grounds for objection to this influence which the University undoubtedly exerts upon secondary education through its matriculation requirements were these requirements such as to constitute a demand for a liberal education and to give a lead to the schools.

If this has ever been a conscious aim, it seems to have been largely lost sight of, so that it is difficult to discover in the present arrangements any well defined principle. Probably many factors have contributed towards this result, but two seem to be of special importance. First, it may be that the ideal of a liberal education has become obscured because of vocational considerations or because there is always a tendency to have in view the special subjects to be studied later at the University. Secondly, while certain subjects have for various reasons—partly traditional, partly substantial—become strongly entrenched in schools, occupying a considerable portion of the school curriculum, others are struggling for

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<sup>1</sup> An address to the Teachers' Guild of New South Wales, delivered 30th June, 1933.

recognition and status. University professors and schoolmasters alike have an interest in maintaining or improving the standing of their respective subjects because of what they naturally conceive to be their dignity and importance. This is understandable and, up to a point, commendable; but without any guiding principle to assist in evaluating the claims of the various subjects, the unchecked struggle for status is apt to lead to certain anomalies. The matriculation examination is used as a lever to enhance the status of subjects, and to have a subject recognized for matriculation is known to be the most certain means of ensuring that it shall be studied seriously in schools. Having secured recognition, the next steps are usually the preparation of a more or less elaborate and detailed syllabus—drawn up by University professors without necessarily much insight into the needs of children—a raising of the standard and an increase in the number of school periods devoted to the subject in question.

These two factors combine to bring about premature specialisation and a forcing of the standard in each subject separately without regard to the school curriculum as a whole. A sort of "all or nothing" principle comes to prevail; if a given subject is "taken", so much time has to be devoted to it in order to come up to the prescribed standard that other subjects, even some of fundamental importance in a liberal education, have to be dropped altogether. This is speciously described as "maintaining the standard", but it involves such a narrowing of the scope of the school curriculum that the ideal of a well balanced education has to be abandoned. The prospective candidate for matriculation is inevitably restricted to a very limited and often seemingly meaningless choice of subjects, and it is not surprising that the choice should be determined almost entirely by vocational and professional considerations or by the path of least resistance. The claims of individual subjects and the undue importance attached to examinations have tended to distort the perspective of the school curriculum. People think in terms of subjects—especially their own subjects—and of examinations instead of in terms of what constitutes a liberal education. As so often happens, in considering the details of the process of education we are apt to forget the product; by concentrating upon the means we tend to forget the end. If, therefore, one were asked to diagnose what was wrong with the average product of our educational system one would be inclined to say, in medical phraseology, that he appeared to be suffering from a deficiency disease due to an unbalanced intellectual diet and also from mental indigestion



caused by excessive cramming for examinations. In order to remedy this disease, it is clear that the present regime must be modified. If a reform is necessary, may it be one guided by ideas as well as by interests, a reform that will have principles and not egotism for its mainspring.

Because of the importance of the matriculation requirements in the educational scheme, and in view of the fact that modifications in these requirements would inevitably react upon secondary and even primary education as well as upon the University itself, a committee of the Professorial Board of the University was formed at my instigation two years ago to consider the principles and arrangements governing entrance to the University. A memorandum on the subject was submitted by me to the committee, and I now propose to lay before you and to elaborate some of the suggestions contained therein.

Before discussing what form the matriculation examination should take, it is reasonable to ask whether any examination at all is necessary. If one could rely entirely upon the headmaster's certificate, if we could safely assume that in an approved school all subjects fundamental to a sound education would be studied to a satisfactory standard, if we could be satisfied that without the stimulus of examinations a high standard of school work would be maintained, then it might be possible to dispense with any matriculation examination whatsoever. This would in many respects be a consummation much to be desired. It might serve to mitigate some of the drab uniformity of our educational system, it would give more freedom to the more enterprising schoolmasters to develop their own methods instead of being fettered by the necessity for working to the examination schedule; it might, in short, foster an interest in education instead of in "coaching" for examinations. Only an appeal to experience could determine whether this plan is one which would work satisfactorily. The experiment has been tried in Victoria, and although I can not speak from sufficient first hand knowledge of the results, I gather that many who are in a better position to judge have misgivings regarding it, owing chiefly to the unreliability of the headmaster's certificate. The general consensus of opinion here seems to be that an examination is necessary, and that it would not be possible at present to depend upon the headmaster's certificate alone.

Presuming, then, that an examination is necessary, in what light are we to regard it? Is it to be merely a perfunctory intellectual ordeal uninspired by any underlying philosophy, an arbitrary challenge to those desirous of gaining access to a higher seat of learning, or even a purely *ad hoc* qualifying

examination? Surely not! If the matriculation examination stands for anything, it ought to be a test of a well balanced general education and of fitness to enter upon an academic career. If this principle be admitted, then the onus lies with the University to show through its matriculation requirements what it regards as a liberal education. It should be clearly understood that for the moment we are primarily concerned with the requirements for entrance to the University. Nevertheless, if our conception of a liberal education be a sound one, then the kind of general education which should fit a man to enter the University ought also to fit him for many other walks in life. It is not the primary function of schools any more than it is the primary function of Universities to provide a purely vocational training. This sort of training can best be acquired in the technical colleges or by apprenticeship in business or in industry. The functions of a liberal education are to cultivate and enrich the mind, to draw out to the best advantage the innate faculties, to provide the whole man with the means of continued growth, to develop character, poise, breadth of view and good taste and in general to fit the individual within the limits of his natural endowments to deal intelligently and sensibly with the greatest variety of situations and problems. A liberal education will make neither unthinking slaves nor robots, but it should make for fullness of life and should enable men to turn their hands and minds effectively to many things.

An examination can at the best be only an imperfect and partial test of a liberal education, but it should at least be capable of providing evidence regarding a certain number of fundamental qualifications. Among these are the following:

- (a) Proficiency in the use of those instruments which constitute the chief media of intellectual intercourse, instruments which are indispensable in the pursuit of knowledge:

Languages.

Mathematics.

- (b) A certain background of knowledge and acquaintance with method necessary for a philosophical approach to the problems of the world around us:

History.

Science.

Stated in the most general terms, these should be regarded as among the fundamental qualifications for entrance to the University, fundamental criteria, therefore, of a liberal education. Here it may be well to draw attention to the fact that an examination confined in its scope to any one of the



recognized alternative groups of subjects at present qualifying for matriculation would not constitute a test of a well balanced general education according to the above criteria. In order to give effect to the above principles it would be necessary to increase the present range of subjects and to modify the standard in certain directions; *but what is even more urgently required is a new selection of material and a new method of presentation in certain subjects* in the school curriculum.

While emphasizing that certain subjects ought to be regarded as of general and fundamental importance, it is not proposed that the school curriculum should be limited to these, nor is it suggested that we should ignore the variations in natural talent by insisting upon uniform standards. Provision has to be made to meet the varying interests and aptitudes of pupils. It should therefore be adopted as a further principle that there should be a diversity of standards and a wide choice of optional subjects, provided always that fundamental requirements are conserved. The choice of optional subjects and the standard aimed at should not be determined by fixing prematurely the choice of a career and then specializing in accordance with vocational requirements. This would be an inversion of the true order. Rather should the choice of subjects and the standards therein be determined primarily by talent and interest; the question of vocation should be settled after the child's natural bent has become manifest, when the special requirements should present a minimum of difficulty. Indeed, provided that pupils were allowed to follow their own bent and received a good general education, it is doubtful whether special University faculty requirements need be laid down. Individuals differ enormously not only with respect to the character and degree of specialization of their aptitudes, but as regards the age at which these show themselves, and this constitutes a further argument against premature specialization. Differences in natural endowment appear to be most marked in the case of mathematical, linguistic and artistic ability, so that a greater diversity of standard is called for in the corresponding subjects. It might even be considered expedient to introduce some special regulation to meet the case of individuals having unusual ability in one direction, but very inferior capacity in another, otherwise it might now and again be impossible for a genius to gain admission to the University.

It will be observed that the examination test omits from its purview two important sides to a liberal education. The test is almost entirely an intellectual one and takes no account

of character or of art, with the possible exception of literary art.

I would suggest that it is in this connection that the schoolmaster's report, submitted preferably in the form of a confidential statement, might prove of service. Evidence that a candidate for matriculation had distinguished himself in any of the fine arts or in the various social activities of the school outside the classroom, and that he was of good character, should be taken into account in finally assessing his suitability for admission to the University.

It is now necessary to review in more detail the subjects of the matriculation examination.

#### LANGUAGES.

The study of language may be considered from three points of view:

1. Language as an instrument: one of the media of intellectual intercourse.
2. Language as a science: the structure, development and history of language, *i.e.*, linguistics.
3. Language as literature: one of the fine arts.

1. *Language as an instrument.* The languages which at the present day constitute the chief media of intellectual intercourse are English, French and German. Most of the important literature in science and in other branches of learning is accessible in or through these languages. They are, therefore, the means by which we are enabled to enter into the community of intellectual life and activity in the world to-day. It is generally agreed that a very high standard in English should be insisted upon, and every candidate for matriculation should be required to show that he is able to read and write the English language correctly. The writing of essays is probably the best test, but it may be supplemented by others, for example, paraphrasing, correction of sentences. The all important requirement should be proficiency in composition. In this connection, the writing of essays upon historical subjects in schools should be encouraged, linking up the study of history with that of the correct writing of English.

Unfortunately, an oral test is not practicable, and would present difficulties on account of the social implications which speech may carry; but I would urge the importance of encouraging in schools the proper speaking of English.

In order further to strengthen the position of English, I would recommend the study of linguistics as part of the basic school course, but I shall revert to this later on.



As regards modern foreign languages, the important thing from the point of view of language as an instrument is a reading knowledge. A reading knowledge of preferably both French and German is desirable, as students in nearly every branch of learning ought to be able to have access to the appropriate literature in these languages. In Australia, which is so distant from the countries where French and German are spoken, a reading knowledge is no doubt the main desideratum; but it would be highly undesirable to discourage the correct speaking of these languages. A language lives in being spoken, and learning a language by speaking may be one of the best ways of acquiring a practical reading knowledge. I hope that some day it may be made possible for every modern language master in this state to spend at least one sabbatical year in the country whose language he teaches. A study of the language of a country is the best introduction to a study of its culture, but this is only possible through personal contacts or at least with the aid of a reading knowledge of the language.

In aiming at a reading knowledge, it ought not necessarily to follow that the study of modern languages would become superficial and slipshod, thereby depriving it of any value as an educational discipline. That modern languages can be taught in such a way as to provide a mental discipline little if at all inferior to that which may be derived from the learning of ancient languages, there can be no doubt. A great deal depends upon the teacher. In order to obtain this discipline, there is no need to assume that modern languages ought to be taught along the same lines as ancient languages, nor should it follow that the way to learn a modern language is to concentrate upon all the rules for evading the numberless pitfalls of grammatical construction. Surely there is a *via media* between the two extremes of superficiality on the one hand and meticulous attention to minutiae on the other! In view of the tendency to go to extremes, opinions are divided as to whether it is desirable to insist upon a thorough study of one modern language only, or to permit a less thorough knowledge of more than one. I should prefer to leave the two alternatives open, provided always that by the lower standard is meant a good reading knowledge. The examination at the lower standard should take the form of moderately difficult translation from the foreign language into English and very simple translation in the opposite direction.

It is a moot point whether Italian should be recognised as an alternative to French or German. Although much important work is being published in Italian, it can hardly be

claimed that the language yet ranks with French, German and English as a world-wide literary medium.

Coming to the position of the ancient languages, it should be pointed out that Latin and Greek are no longer what they were formerly, the chief media of intellectual intercourse. This is precisely the factor which places them in a different category from the more important modern languages. It is desirable, therefore, to endeavour to get a clear idea of what is being aimed at in studying the ancient languages.

The humanists of the Renaissance revived the study of Greek, partly because of the literature and partly because it gave them direct access to the writings of the Greek scientists and philosophers, which contained the best knowledge of nature then available. The scholars of the Renaissance likewise helped to develop an interest in good classical Latin in place of the "dog Latin" of the schoolmen, but above all they tried to recover the true spirit of classical thought, a free spirit of inquiry—what we should to-day call the scientific spirit. Latin was therefore studied throughout the countries of the Roman Empire because, like Greek, it was the language of learning in all its branches—not only literature, law, history and, above all, theology, but natural science and philosophy. It is true that the Romans did not contribute much to natural science, but most of the important Greek works upon philosophy, science and medicine were ultimately translated into Latin, either directly or through Arabic. Thus a classical education, until comparatively recent times, comprised the whole of knowledge—it was, in fact, a liberal education—and a reading knowledge of Latin and Greek was just as essential formerly as a reading knowledge of modern languages is at the present day, and for much the same reasons. But we have now to reckon with an entirely different state of affairs. The ancient languages are no longer the key to the whole of learning; the classical writings of the ancients have ceased to be the main sources of natural knowledge, and most of them are now available in excellent and accurate translations, so that there is no longer the same necessity for being able to consult the original; modern science has so far outstripped the highest achievements of the ancients in the understanding of nature that the writings of the Greek and Roman scientists have become of little more than historic interest, and modern science employs modern languages as its literary medium. Furthermore, a great classical literature has been created in modern times, in living tongues, a literature which not only vies with the classical works of the Greeks and Romans, but touches us more



closely. For these reasons, modern languages constitute the chief cultural literary media at the present day, and a knowledge of modern languages is indispensable in order to keep abreast of the intellectual life of the present-day world. Nevertheless, the main purpose of learning the ancient languages remains the same so far as the ancient literature is concerned, and when this purpose is in view a standard similar to the original should be required. The study of Greek and Latin is entirely worthy when it aims at the attainment of such proficiency in translation that the classical works upon literature, philosophy, science, law, history, etc., in these languages can be read in the original with such facility as to render their perusal of real cultural value and interest. However, only a small proportion of pupils have the inclination or the capacity to reach this goal. Such a standard of attainment would not at the present day be feasible as a general cultural requirement, except at the expense of other subjects which ought certainly to be included in a well balanced general education. This thorough study of the ancient languages is for specialists—those who, because of talent, interest or vocational requirements, aim at their mastery.

The study of the ancient languages is commendable, then, when it leads to the genuine study of the "classics", and this, to be worth while, requires a mastery. Is there any other object in studying the ancient languages? Apart from aiming at a mastery, a study of Greek and Latin would be valuable if it had in view the treatment of these languages as sources of English and as a means of gaining an insight into the structure and development of language. Can it be said that this is a conscious aim in the teaching of Latin or Greek to the very large number of boys who have neither the intention nor the ability to aspire to classical scholarship? If not, can it be claimed that the teaching of ancient languages to these boys has any definite goal at all? For the majority of pupils the standard of achievement and the method of presentation seem to miss both objects, that is to say, classical scholarship on the one hand and linguistic knowledge on the other. This is no doubt due to the fact that the study of Latin and Greek is begun as though for all pupils the foundations of classical scholarship were being laid, as though these languages were to be universally used in the same way as of old; but this is no longer the case, and the time is long overdue for a reconsideration, not only of the ends, but the means of teaching them. It is not my intention to criticise the traditional methods of teaching the ancient languages with a view to their mastery; but it is doubtful whether these methods

are the most suitable for the purpose of linguistic study. What is required is not so much the teaching of languages as the organic treatment of language, and this calls for a new selection of material and a new method of presentation. This need could be met by the introduction of a course in linguistics.

2. *Linguistics*.—Language is an organic growth and a characteristic product of the human mind. Language maketh man, and the study of its development and structure should be a subject of living and human interest. It could certainly be made such if presented in the proper manner. The general study of language would probably be of great cultural value and give a better feeling for language, a greater appreciation of the modes of expressing ideas and of the meaning of words than the meticulous study of grammatical details in, say, one ancient language. Needless to say, what is required is not the comparative philology of advanced research, otherwise it might well be asked how it would be possible to undertake such a study without a thorough knowledge of the languages to be compared. The exercise of a little understanding and imagination should make it apparent that a great deal which is interesting and useful can be learned about language which does not call for anything so ambitious or exacting. The case of general linguistics is parallel to that of general science. When science was introduced into schools, the school courses were framed along the lines of the University courses, that is to say, science was split up into its special branches—physics, chemistry, botany, zoology—each of which had to be taught by a “specialist”. These divisions, however necessary from the point of view of the specialist and of the division of labour in scientific research, are largely arbitrary and vocational rather than in the nature of things. It is being recognised that the subject of science has to be approached from a somewhat different angle in schools as compared with the University, and the same should apply to the study of language. In both cases what is needed is a more general treatment of the subject—general science instead of special branches of science and general language instead of special languages. There is no more impossibility about presenting the one than the other. Before it became possible to teach general language in schools, very careful consideration would have to be given to the drawing up of a suitable syllabus and the writing of a suitable text-book. We must look to competent scholars to collaborate in making such a contribution to education. May I offer a few suggestions as to the possible lines along which such a course might be framed?



1. Definition of language.  
Sound, gesture, writing, signalling, lip reading.  
Origin and evolution of language.
2. Writing.  
Ideograms. Phonograms.  
Picture writing — Egyptian hieroglyphics,  
Chinese.  
The Rebus.  
Syllabaries—Japanese Cuneiform.  
Letters.  
The origin and evolution of the alphabet:  
The Greek alphabet.  
The Latin alphabet.
3. Phonetics.
4. The expression of relation—comparative grammar.  
The development of the sentence — monosyllables,  
holophrastic expressions, sentences.  
Chief parts of the sentence and probable order of  
evolution.  
Different means of expressing relation:  
Order of words, inflexion, analysis, vowel  
variation.
5. Comparative grammar, with special reference to the  
Indo-European Languages.  
(a) The Indo-European peoples, their origin, mode  
of life and diffusion. Affinities of vocabularies,  
domestic relationships.  
(b) Parts of speech—discussed from a comparative  
and functional point of view.  
(c) Syntax.
- 6 and 7. Classical Languages.

*Pari passu* with the preceding would go the elementary study of Latin and Greek, with a view to illustrating their general structure and their relation to modern languages. Something akin to the direct method, giving as it does a freer association of ideas and a more natural sequence of thought, would probably be best adapted to giving an insight into the characteristics of these languages. While introducing all that was relevant, it would reduce to a minimum much of the formal "drill" at declensions, verbs, etc., which is such a tax upon the memory and so burdensome and time consuming. Greek and Latin would also be dealt with as sources of English, and importance would be attached to the study of derivations and the laws governing them, the subject being introduced and

arranged with some reference to the contributions of the Greeks and Romans to Art, Philosophy, Medical Science, Mythology, Law, Ethics, Agriculture, Military Art, etc.

8. Dialects and the laws of change.

The relation of dialects to classical languages.

Mediaeval Latin.

The development of the Romance Languages.

9. English.

Sources other than those previously considered.

Words of Teutonic origin.

Grammar. Its characteristics.

Spelling. Orthography and its history; its reform.

Borrowings.

Such a course would probably require two to three periods a week over three years of the school curriculum. It would be a much better preparation for anyone intending to study Medicine and the Sciences than the present effete and aimless discipline. It would also be better to have such a course than to eliminate the study of the ancient languages altogether, as has been done in a good many places. In Medicine and Science we are the heirs of the Greeks rather than of the Romans, much of our vocabulary and many of our ideas are Greek in origin; but Greek is not a compulsory requirement for matriculation either in Medicine or in Science, and very few students take it. Latin is no longer demanded by the general Medical Council as a matriculation requirement for students entering Medicine, nor is it obligatory in Holland, Sweden and some American medical schools, and it is not required for matriculation in the Faculties of Science, Engineering, Agriculture, Veterinary Science and Economics in the University of Sydney. The probable reason for this is that we are on the horns of a dilemma—either no Latin and Greek or too much and of the wrong sort. Yet no one should be regarded as having had a sound education who is entirely ignorant of these languages, especially in their relationship to English. A course in general language such as that suggested might therefore be made a general cultural requirement and a part of the basic school curriculum. I would suggest placing general language on the list of general matriculation requirements either as a separate and obligatory item or provisionally as an alternative to one ancient language. For the rest, I should place all foreign languages, ancient or modern, with the exception of French and German, in a large group of optional



languages, to be taken either at the discretion of the candidate or, if need be, in accordance with special faculty requirements.

It might be objected that a course in general language would, from the point of view of its value as a mental discipline, be an imperfect substitute for the study of one ancient language, even at the lower standard along the traditional lines, but I should not be prepared to express an opinion on this point until details were available regarding the method of presentation. I can see no *a priori* reason why such a course, particularly the sections dealing with elementary Greek and Latin, should not provide a satisfactory discipline in accuracy. I do not doubt that the study of Latin may be an excellent training in accuracy, but I am sceptical of its unique value or even its preeminence in this respect. Surely there is a sufficient number of fundamental subjects capable of yielding such a discipline which have to be studied, not merely for the sake of a formal discipline, but because of their intrinsic interest and importance—mathematics, science, modern languages, history! A training in accuracy is dependent not so much upon the subject matter as upon teacher and pupil, and there should be an insistence upon thoroughness and accuracy in every department of study if right mental habits are to be formed. This is an ethical rather than an intellectual question, and it is just as general in its application as the moral injunction, “whatsoever thy hand findeth to do, do it with thy might”.

3. *Literature*.—With regard to the study of language from an æsthetic point of view, it is obvious that the mother tongue should be the chief medium for the inculcation of literary principles and the cultivation of literary tastes. Other languages, ancient or modern, must inevitably be of very subsidiary importance in this respect, as considerable facility in reading has to be acquired before genuine æsthetic appreciation is possible. We are fortunate in having at our disposal a great literary heritage in the English tongue and, except for specialists, it seems unnecessary to attempt at great pains to get through foreign languages that which can be more readily derived from a thorough study of English literature.

Some knowledge of Greek and Roman mythology and history is essential for the understanding of classical allusions in English literature. This should be acquired, not through the medium of Greek and Latin, but by means of suitable readers in English.

The technique of examining in literature, as in other branches of art, seems to present peculiar difficulties. It is a moot point whether the prescribing of set literary works with

a view to examinations is desirable. Some are of the opinion that working for examinations provides a stimulus, without which there would be no serious study; others feel that it stultifies the whole purpose of æsthetic studies, the cultivation of a taste for "art for art's sake". At the best it is to be hoped that the pursuit of a vicarious goal may help to carry some of the weaker spirits in the right direction. However, one would like to see greater freedom permitted to schoolmasters in the selection of literature. It is a depressing thought that thousands of children of the same age and generation throughout the state are studying the same plays of Shakespeare, reading the same novels, learning the same poems, etc., and chiefly for the sake of examinations. Perhaps, as already suggested in the case of the other fine arts, the solution of the difficulty might lie in the schoolmaster's certificate, which could provide the necessary evidence of the ground covered and the way in which the candidate acquitted himself in literary studies at school. There would then be no necessity for setting questions upon prescribed works in the matriculation examination, and if any questions upon literary criticisms were included, they might be confined to the actual criticism of some short piece inserted in the examination paper and seen possibly for the first time. The examination in English might perhaps contain questions involving an acquaintance with literary principles and the history of English literature.

#### MATHEMATICS.

It goes without saying that a thorough grounding in mathematics should be an essential feature of a liberal education. While recognising that mathematics is not merely an instrument which may serve the sciences but gives insight peculiar to itself, it would seem desirable to lay greater emphasis upon those mathematical procedures which are of philosophical importance and which are of wide application in the sciences and in everyday life. I refer particularly to the use of logarithms, graphs, elementary calculus and elementary theory of probabilities with applications to statistics.

It should be borne in mind, however, that just as individuals differ enormously as regards linguistic ability, so do they exhibit the greatest diversity of talent with respect to mathematics. There should, therefore, be a corresponding diversity of standards in the matriculation examination. The examination should be a test of a candidate's grasp of mathematical principles rather than of his ability to attack difficult problems.



## HISTORY.

History, like the physical and biological sciences, may serve to encourage the scientific spirit, the spirit of impartial and rigorous criticism, and it provides a background against which the issues of the present-day world may be viewed. History, however, calls not merely for scientific analysis and balanced judgment, but for the artistic synthesis and sympathetic interpretation of its data. In much greater measure than the physical and biological sciences does it engender a sense of perspective, a sense of human values, and its study is essential for the understanding of our moral, social, political and economic environment. History may therefore be claimed to be a subject of fundamental importance in a cultural education, and it ought to be placed on the list of obligatory subjects for matriculation. Objection to this has been raised on the ground that there is an old provision contained in the University and Colleges Act, framed originally in order to meet sectarian difficulties, to the effect that no student within the University can be compelled to sit for an examination in modern history. This would appear to be an anachronism, and I gather that the religious issue would not be a real one at the present day. Candidates should be examined upon:

- (a) General History, i.e., world history.
- (b) British History, including social and economic history.

As in the case of language and science, the selection of materials for the teaching of history, more especially world history, requires careful consideration. No really satisfactory world history for schools is at present available, although there are good books on European History, which covers much of the relevant ground. Van Loon's "The Story of Mankind" is perhaps too elementary, while H. G. Wells' "Outline of History" seems to be too large, besides being anathema to historians because of the inaccuracies and doubtful interpretations it contains. Nevertheless, for breadth of treatment and lucidity of presentation, Wells' "Outline" offers a challenge to professional historians. What is required is an outline of the great movements of history on the one hand and a more thorough study of the history of our own people on the other. The detailed study of a limited period should be left to specialists, and the same applies to Ancient History, which should be ancillary to the study of the literature and culture

of the Græco-Roman world. Questions on Ancient History might be asked in the papers on higher Latin and Greek. Those portions of ancient history, a knowledge of which is deemed essential in a general cultural education, should be incorporated in the course on general history.

#### GEOGRAPHY.

Just as a knowledge of history is essential for the understanding of the social environment, so is geography, the study of the immediate environment, necessary for an understanding of the world about us. Those who hold that educated people ought to have some knowledge of the nature and interpretation of the world around us would regard geography as well as history and science as a fundamental subject in a well balanced curriculum. Within recent years geographers have done much to liberalise the teaching of geography, and they have accomplished what we are now attempting to do in language, history and science. In the process the subject has lost nothing as a discipline, and it has gained enormously in scientific and human interest. The examination should be on broad lines and should include questions upon :

- (a) General geographic distributions and interrelationships.
- (b) Elementary economic geography.

Economics has sometimes been bracketed with history and geography in a group of social sciences; but although some acquaintance with economic principles may be desirable in a general education, it would seem unnecessary to introduce it as a separate subject. Economic history and economic geography, incorporated in the general courses on history and geography, would probably provide the best setting in which to present the subject. It is a moot point whether economics is a suitable school subject. Among other difficulties, it might easily lend itself to political exploitation. On the other hand, if well taught it might prove an interesting and useful subject for boys entering business; but it is doubtful whether it is necessary or desirable to have it as a matriculation subject. Perhaps it might be placed on the list of optional subjects.

#### SCIENCE.

In an education which is so much concerned with book learning it is refreshing to turn to a subject which deals

directly with nature, one which requires for its study the use of the hands and the senses as well as the intellect. The main purpose of teaching science in schools should be to afford facilities for practice in scientific method and the cultivation of a scientific habit of thought. The discipline of science, if rightly employed, can be made a powerful instrument for the training of the mind. This is of even greater importance than an extensive knowledge of scientific facts and theories. However, a scientific training is concerned not merely with the provision of a formal discipline; its aim is the understanding of nature. The study of a single branch of science can not afford an adequate training in scientific method, nor can it give a comprehensive view of the world as revealed by science. A satisfactory course in science would preserve both the elements of formal discipline and breadth of treatment. Here, again, it is a question of the proper selection of material and the method of presentation. Experimental and quantitative work, as well as qualitative and descriptive treatment, will be necessary if the training is to be valuable as a discipline. The presentation of the subject should be essentially concrete, taking observation and experiment as the starting point and then making the necessary inductions and deductions. The experiments and illustrations chosen should be simple, and if possible drawn from familiar objects and phenomena. Every effort should be made to stimulate curiosity, imagination and wonder, to cultivate a love of nature and a desire for knowledge for its own sake. The present courses in science either lack cohesion and disciplinary value on the one hand or they are too academic and specialised on the other, so that pupils tend to be either bored or unable to comprehend.

A course in general science along the lines suggested should form a part of the basic cultural curriculum, and it should extend over a period of about three years at least. The subject should be made obligatory for matriculation, the special branches of science—Biology and Physical Science being relegated to a group of optional sciences.

Since the essential discipline of science is apt to be replaced by mnemonic devices when working to the examination schedule, it is important that the examination syllabus should be framed along very general lines. The examination should be a test of a candidate's knowledge of the elementary principles of the fundamental sciences, particularly as applied to an understanding of familiar phenomena. A course



providing a suitable preparation for the examination should comprise the following:

1. Biology, including:

- (a) Elementary systematics—the main morphological features and mode of life of the chief divisions of the animal and vegetable kingdoms. Evolution.
- (b) Elementary physiology—the chief functions of living organisms.
- (c) Elementary œcology — œcological succession, adaption, parasitism (disease).

2. Physical science.

An elementary knowledge of the following, particularly as applied to the understanding of the nature of common objects and phenomena.

- (a) General physics.
- (b) Dynamics.
- (c) Heat.
- (d) Light.
- (e) Sound.
- (f) Electricity and magnetism.
- (g) Chemistry—the simple laws of chemical action and combination.

### SUMMARY OF MATRICULATION REQUIREMENTS.

In summing up the matriculation requirements, one should begin, not by fixing in advance the number of subjects to be “taken”, but by first drawing up a list of those which should be regarded as fundamental and obligatory, and then proceeding to discuss such questions as standards, optional subjects, the desirability of taking all subjects at one time or by instalments, etc. I would suggest the following scheme:

#### *Scheme.*

Every candidate should be required to pass an examination upon the following:

- 1. English.
- 2. One of the following: French, German.
- 3. General language (linguistics).
- 4. Mathematics.
- 5. History.
- 6. Geography.
- 7. General Science.

## 8. One of the following:

- (a) Italian, Japanese, one language from Group 2 not already taken, or one language from Group 2 at the higher standard.
- (b) Greek, Latin, Hebrew.
- (c) Physical Science, Biology, (?) Geology.
- (d) Advanced Mathematics or Mechanics.
- (e) Advanced History or Advanced Geography. Economics.

Should the above scheme not be acceptable, I should suggest the following compromise:

*Provisional Compromise.*

- 1. English.
- 2. One of the following: French, German.
- 3. Mathematics.
- 4. History.
- 5. General science or one of the following:  
Physical Science, Biology, (?) Geology.
- 6. One of the following:
  - (a) Greek, Latin, Hebrew, Italian, Japanese or one subject from Group 2 not already taken.
  - (b) Geography, Economics or one subject from Group 5 not already taken.
  - (c) Mechanics.

One of the subjects in Group 2 to be taken at the higher standard or two at the lower standard.

English and one subject other than those already taken in Group 2 to be taken at the higher standard.

Attention has repeatedly been drawn to the *necessity for extending the range of the basic course, and for having a new selection of material and a new method of presentation. A special committee constituted of interested bodies should be appointed to go into this matter and to define the scope of each subject, its relation to the others and the time allotted to it in the school curriculum.* The basic requirements should occupy the first three or four years of the secondary school curriculum, leaving the last two years for specialisation. The subject of general language should be omitted from the list of matriculation subjects for the present, pending further consideration of the details of a syllabus and the writing of a suitable text-book. If a satisfactory syllabus and text-book become available, the subject might be introduced at first as a alternative to one ancient language; subsequently it might be placed on the list of obligatory subjects.

It is impossible here to go into the question of standards in detail, but I would suggest that an endeavour should be made to make standards conformable with nature. This might be met by having—

One standard in English.

Two standards in general language, ancient languages, history, geography, science.

Three standards in modern languages and mathematics.

An average requirement should be struck, with equivalents and compensating standards about this mean. This mean would comprise:

English at the higher (and only) standard.

Modern languages at the intermediate standard (*i.e.*, French and German at the reading standard or one at the intermediate).

Mathematics at the intermediate standard.

Other subjects at the lower standard.

(It is to be understood that the terms higher, lower and intermediate, used above, do not refer to the present standards.)

If either mathematics or a modern foreign language were taken at the lower standard, one other subject (exclusive of English) would have to be taken at the higher standard.

If science were taken at the higher standard (*i.e.*, general science plus a special branch of science as in 8 (c) above), then modern foreign languages might be taken at the lower or intermediate standard, but mathematics at not less than the intermediate standard.

Similarly, if geography or economics were taken at the higher standard, modern foreign languages could be taken at the lower standard, but mathematics at not less than the intermediate standard.

If linguistics, ancient languages, ancient history or history were taken at the higher standard, mathematics might be taken at the lower standard.

Owing to the large number of subjects, some provision should be made whereby two or more subjects might be taken at the lower or intermediate standard at a period not exceeding two years before sitting the examination in the remaining subjects. The examination in these two subjects would be taken about the end of the third or fourth year of the secondary school curriculum. This would make it possible to specialise during the remaining two years and to concentrate upon those subjects for which the individual had real talent. The subjects



already passed need not necessarily be entirely dropped, but could be continued in a very limited number of school periods and not in formal classes. Evidence of "further study" might be incorporated in the headmaster's certificate.

#### GENERAL REMARKS ON EXAMINATIONS AND ARRANGEMENTS FOR CONTROL OF MATRICULATION.

Examinations are like some poisons, useful in small quantities but dangerous in big doses. It is impossible to dispense with them entirely, and they have been found by experience to constitute a fairly accurate means of measuring a candidate's attainments and ability in many—though by no means in all—directions. The chief evil lies in the undue emphasis which is laid upon examinations. The passing of examinations, instead of being a simple guarantee of competency, has become magnified into an end in itself, and individuals and schools are judged almost entirely by the results obtained in competitive examinations. The results of a leaving certificate or matriculation examination may even be "held in evidence" against a man for the rest of his career. All this is deplorable, especially when it goes hand in hand with a stereotyped school curriculum. The shackles imposed by the necessity for working strictly to the examination schedule limit the freedom of schoolmasters who know that their reputation and their promotion depend upon examination results. In order to mitigate these evils, certain reforms might be suggested. Among these are the following:

All honours examinations should be abolished.

The results of school examinations should not be published in the press, or if the names of candidates are permitted to be printed, they should appear in alphabetical order and not in such a manner as to invite invidious comparisons between schools.

The standing of schools and schoolmasters should not be judged by examination results alone, and education authorities should avoid any action which might give rise to such an impression.

The examination for the school certificate should be separated from the matriculation examination. There might be an external and an internal matriculation examination, but no pupil should be allowed to sit for either matriculation examination unless he is a genuine candidate for admission to the University.

All matriculation scholarships and exhibitions should be awarded on the results of the matriculation examination alone.

The University should determine its own matriculation requirements, but the time has come to break with the tradition that this is entirely a matter for the Faculty of Arts, otherwise a sense of perspective might be lost owing to the fact that members of that faculty have special interests in the corresponding subjects taught in schools. The entrance board should include on its personnel individuals interested in education, irrespective of faculty, and, in addition, it should have the power to co-opt educationists from outside the University. The entrance board would nominate the examiners, whom it would also have the power to co-opt. The examiners would ordinarily be the University professors in the matriculation subjects and possibly a certain number of external co-examiners.

In conclusion, it would indeed be gratifying if it were possible to dispense altogether with a matriculation examination, but if it is found expedient to have one, it ought to be a test of a sound education.

If all the suggestions contained in this paper are not acceptable or immediately practicable, I trust that they may at least serve to hold before you the ideal of a liberal education, for that should be the goal of our common endeavours.

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## FACTS AND FALLACIES IN PIANISM.

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By MARY COCHRAN,

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Author of "Ultimate Principles of Pianoforte Teaching  
and Playing", etc.*

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IN the easy-going old days, before teachers had discovered that skilled teaching was an art, it was assumed that anyone could teach anybody anything provided he knew it himself. That if a pupil failed to make satisfactory progress, it was the fault or misfortune of the pupil. Today school teachers must give evidence of their skill in teaching as well as of knowledge of the subjects they aspire to teach. Training colleges are provided for their acquisition of that skill.

It is a curious thing that training in the art of teaching such subjects as pianoforte playing is not yet considered necessary. The fact that the teaching of such subjects is still largely empirical is taken as a matter of course. A glance through the pages of leading English and American magazines for music teachers makes this fact quite clear. When it has become a matter of common knowledge that to know about an art does not imply skill in the practice of that art, and still less does it imply skill in another art which differs from it as widely as the art of teaching differs from the art of pianism, then the fallacy of the notion that teachers of music do not need training will be evident, and we may expect that colleges will be established to provide teachers of music both with the necessary knowledge and with facilities for practice in teaching under skilled supervision. Before that day dawns it is to be hoped that writers of pianoforte text-books will have learnt the importance of a clear exposition of the essential facts of pianoforte technique. In such books today, what are given as facts by different writers are so conflicting that the bewildered reader can only conclude that certain of these "facts" must be fallacies. How shall he learn to distinguish the true from the false? By an appeal to the sciences upon which the three arts of the piano teacher are based: the art of music, the art of the



performance of music, and the art of teaching—arts which can be effective only to the degree that they are soundly based on those sciences.

Many years ago, when searching for the solution of certain problems in pianoforte teaching, I found that the only textbooks available correlated one or more of the arts of the piano teacher and one or other of the sciences underlying those arts. Such partial correlation proved insufficient for the solution of the problems. Indeed there was evidence that it might be misleading. It was not until I had correlated all the arts and sciences directly concerned that their solution became possible. The sciences were psychology, anatomy, certain departments of physics, chiefly mechanics, and, to a small extent, physiology also. The three arts of the music teacher have been named, and the problems and their solution published elsewhere.<sup>1</sup>

Even after the necessary preliminary study of each science in so far as it related to music, it was not always at once apparent which science or sciences held the key to each problem. For example, when studying the anatomy of the upper limb in relation to economy in piano practice, the teaching of science on one point was at variance with my experience. It became evident that there must be a factor as yet undiscovered. There was. It took months to discover it, and when discovered it proved to be not anatomical but psychological. Later I had a similar experience when working on the problem of tone production. It proved at length that physiology and psychology were concerned in that problem as well as physics. These and similar experiences showed the folly of basing one's conclusions solely on a study of one of the sciences concerned, and also explained why these problems had been left so long unsolved.

There are other problems unsolved as yet—or their solution is not generally known—which affect not only musicians but the community generally. For example, the cause and cure of that distressing condition which we call nervousness. What is nervousness? This is what *The Doctor Who Tells* wrote about it in the *Sunday Sun*, Sydney, May 24, 1931: "As far as I know, the modern laboratory cannot find anything abnormal in the nerves of the most confirmed neurotic. As far as I know, they are not starved nor exhausted. Their sheath is intact and their cells are like the cells of a normal person. In other words, I have been unable to find anything wrong with a nervous person's nerves. 'Nerves' have

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<sup>1</sup> "Ultimate Principles of Pianoforte Teaching and Playing". Paling and Company, Sydney.

much to do with the state of the mind and the mental outlook." Is the general belief, then, that nervousness arises primarily from the nerves, that its origin is pathological, a fallacy?

Certainly the condition which music teachers call nervousness, and with which they do battle as part of the day's work, is just the result of a bad habit. Psychologists declare that it is impossible to give concentrated attention to more than one thing at once. Quite a number of things may be done at the same time quite effectively, provided that only one of the things requires conscious attention, that all the others are done automatically. When two different things appear to be under close attention at once, what really happens is that the attention rapidly flits from the one thing to the other. Also that nervousness is a condition of discomfort which arises when the attention is claimed by too many things at once.

Nervousness, then, is caused by the rapid, continuous, more or less anxious flitting to-and-fro of the attention from one thing to another, or to many others in turn. The victim becomes exhausted. He has used up much more energy in attempting to pursue many conflicting aims at once than if he had calmly attempted one only at a time. Certain physical sensations begin to arise in consciousness, at first that "all-gone" feeling, and perhaps chilliness. Each of these sensations is associated with fear. He becomes afraid. Of what is he afraid? Of nothing in particular; he is just afraid. Imagination soon supplies a reason. Someone has said that, even where there is a cause, "fear is only an opinion". Here there is no cause. Next worry sets in, worry which is an abuse of the imagination. I have only too many opportunities of observing this pernicious sequence. A student of a self-conscious type is a likely subject for the development of nervousness, even in an acute form. Like others, he may force his attention to flit rapidly and anxiously to many things in turn. But he, unfortunately, is too strongly interested in his own sensations, either in themselves or in their relation to other people, to disregard their additional frequent and insistent calls for attention, no matter how many other demands are distracting him at the moment. The cure is obvious. He should train himself to use his attention wisely and rightly directed.

The origin of nervousness is a misuse of attention. It would be a step in the right direction if for this term "nervousness", with its misleading suggestion of a pathological condition, we substituted "misused attention". In the case of piano students, the next step might well be, to convince

them of the impossibility of giving, at the same moment, conscious attention to the interpretation of a composition, and the many urgent demands of a technique not yet automatic, and often inadequate. This fact should be evident. But the fallacy is widespread, that technique will be improved by this misuse of attention. Here is the fact of the matter, as set forth by Professor C. E. Seashore. Before one can interpret, "One must have been intensely conscious of technique, must have known laws, must have isolated element after element for intensive study, all severely intellectual, cold and quite free from the artistic impulse, before control of these can become so automatic as to drop into the background of consciousness". Then and then only can interpretation "flow as an inspiration from a soul in the artistic attitude, which means the welling up of the unconscious forces".<sup>1</sup> To put it simply, "no stumbler can interpret". Technique must always be automatic and considerably ahead of the requirements of a composition, before interpretation becomes possible. When these conditions are observed even young children may interpret their little pieces, and with great enjoyment. The will to succeed in the development of technique under wrong conditions, no more ensures a growth of skill in technique than knowledge of technique implies skill in technique.

Passing reference has been made to the relation of knowledge to skill. The two are often confused. A quite intelligent adolescent or adult beginner at the piano, impatient of the many repetitions of a passage he has been compelled to make, will exclaim, "I know how to play it, why can I not do it?" He is confusing knowledge with skill. The mental processes used in acquiring knowledge differ from those used in acquiring skill. A student, because of the relative strength or weakness of certain native tendencies and aptitudes, may acquire knowledge more readily than skill, or skill more readily than knowledge. It is rare to find both aptitudes in a high degree in the same person. While knowledge does not imply skill, skill implies some degree of knowledge. The amount of knowledge necessary to play the compositions of certain composers brilliantly requires no great degree of intelligence. Doctor R. S. Woodworth points out that "There are those with a mental age of ten or eleven, who cannot master school work in the higher grades who yet become real artists".<sup>1</sup> It is hardly necessary to point out that however brilliantly a man of this type might play certain compositions on the piano, he could not teach the piano.

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<sup>1</sup> *Psychology*, p. 282, by R. S. Woodworth. Methuen & Co., London, 1922.



There are cases where there is a fine capacity for logical thought, but an inability to express that thought in words. Schubert is an outstanding example of this type. "He expressed himself with such difficulty, that it was impossible to argue with him. Music was not his principal mode of expression. It was his only one."<sup>1</sup> When one reflects on the value of music to the race, because of its functions which are to express, arouse, modify, and even to transform moods and emotions, remembering at the same time that it is the character and force of our moods and emotions which make or mar our happiness, one is filled with indignation at the humiliations endured by Schubert, because, to our great gain, he lived in a world of sounds and not in a world of words.

Schubert was a composer. Composers are more or less at the mercy of those who interpret (or perhaps merely perform) their works. To a listener with a keen sense of tone quality, the more beautiful a pianoforte composition is, the more distressing is it to hear it played with poor tone quality.

M. Isidor Philipp, Professor of the Pianoforte at the Paris Conservatoire, wrote:<sup>2</sup> "Too seldom is the attention of the pupil directed to a proper appreciation of the tone. Tone is individual. Personally I should have recognised Busoni's tone among a hundred. The best, the most sparkling virtuosity without beauty of tone is a body without a soul." And yet there are those who are still misled by the fallacy that no matter how, or by whom a piano is played, the tone quality will never vary. They themselves are insensitive to variations in tone quality, and therefore deny its existence. Insensitiveness to tone quality is discussed in a former issue of this Journal.<sup>3</sup>

A cat, one evening, taking a leisurely stroll along a piano keyboard, incidentally depressed two or three keys in succession. She was caught in the act by a musician who happened to have a keen sense of tone quality. "Well, Puss," he said, "you have a beautiful tone." But Puss, startled, stiffened her muscles, and in her hurry to escape, depressed other keys with a tone anything but beautiful. What changed the quality of the tone? The first few tones were produced while the cat, undisturbed, preserved control of her exquisite balance of the two forces which depressed those keys, gravitation and muscular force. When startled, she lost that control and stiffened certain muscles in her hurry to escape, thus unduly resisting the pull of gravitation (from the

<sup>1</sup> Grove's "Dictionary of Music and Musicians", Vol. IV, p. 324.

<sup>2</sup> *The Etude*, January, 1931. Philadelphia, U.S.A.

<sup>3</sup> Vol. IX, June, 1931.

listener's point of view) and increasing the push of muscular force. The first mode of key depression when used by pianists is known as the non-percussive or "weight" touch, the second as the percussive or "struck" touch.

Mr. Otto Ortmann describes the nature of piano touch as "essentially percussive".<sup>1</sup> His use throughout his book of the terms finger-stroke, "strike", even "blows"—"to strike equal blows with the finger . . . is much more difficult", *etc.*, (page 242)—shows that he regards a percussive touch as normal and a non-percussive touch as exceptional. Yet he writes: "Its [gravity's] action is certainly one of the most important determinants, perhaps the most important of the forms of movement used in all piano touches" (page 95).

There are two movements involved in key depression. The movement which carries the finger to the key, and the movement by which it is depressed. When the two movements are kept separate, and the finger *placed on its key* by the first movement, and then depressed by the second movement, the touch will be non-percussive and the tone pure, not blurred by the noise of percussion. It will also be rich and resonant if, in the act of depression, the "weight" touch is used, that is if the muscular resistance to gravitation has been reduced to the minimum consistent with skill. Any student of ordinary intelligence can learn to reproduce this beautiful tone. Yet his tone may be individual, because one student's conception of the minimum will differ from that of another.

Why should this desirable tone quality be so rarely used? The reason is, either because it is usually not taught or because speed was demanded prematurely from the pupil at his very early lessons. This demand was met (1) by *the merging of the two movements*, and (2) by *the undue resistance to gravitation*. The emotion of fear in the pupil (the fear of playing too slowly), and of fear in the cat (fear of the man), causes in each case a stiffening of the muscles, which, in its turn, sets up an undue resistance to gravitation.

The use of the percussive touch is thus merely a bad technical habit. It is not inevitable. It is not the "essential" piano touch. The habit of placing the finger on the key does not delay the development of speed except in the early lessons. In the long run it hastens that development.

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<sup>1</sup> "The Physiological Mechanics of Piano Technique", by Otto Ortmann, p. 304. "Laboratory of the Peabody Conservatory of Music", Baltimore, Maryland. London: Kegan Paul, Trench, Trubner & Co., Ltd.; 1929. The author has since been appointed Director of the Peabody Conservatory.

No finer pianist ever visited Australia than Mr. Wilhelm Backhaus. He came to us with a great reputation. For example, M. Isidor Philipp, Professor of Piano Playing at the Paris Conservatoire, in an article in *The Etude*<sup>1</sup> discussed the individual excellences of distinguished pianists. One had "rare musical intelligence", another was "exuberant and charming", another had "rhythm, vivid colour, sentiment and style", another "unsurpassed boldness of technique", yet another "beauty of detail, of nuance, of soul". When it came to the turn of the great pianist with whose work we have the good fortune to be familiar, M. Philipp remarked, "Wilhelm Backhaus has everything". That word "everything" includes, of course, especially to M. Philipp, a consistently beautiful quality of tone. Mr. Otto Ortmann describes the nature of piano touch as "essentially percussive" (page 304). Mr. Backhaus rarely used a percussive touch, and only for a special reason. One might listen to recital after recital, without hearing a single unbeautiful tone.

Mr. Ortmann writes on page 3 of his book: "A finger, hand, or arm is rigid when its shape cannot be easily changed." Then the word "rigid" should never be used in connection with piano technique, because changes in position or "shape" must be made constantly and often with lightning rapidity. The joints within the limits of the playing lever should conform to the rule of the minimum of fixation consistent with skill. They should be *moveless* but never rigid. The joints acting as hinges should, of course, be anything but rigid, they should be in a condition to move freely. On page 167 Mr. Ortmann writes: "The rigidity which is a necessary part of all loud tonal effects"; and again on page 289: "All fast and very loud passages can only be played with excess rigidity." That Mr. Backhaus does not play such passages in this appalling muscular condition is proved by the quality of his tone, and his unfailing poise and ease. When playing, he shows no signs of that strained attention and physical effort so painful to witness in some other pianists. But then his technique is scientifically justified, and therefore economical and easy. It was not chosen by him for that reason. His talent or his genius apparently demanded certain results, and he more or less unconsciously found movements, positions and the muscular condition to satisfy those demands with ease. Take one technical detail, his hand position in those scale passages which he plays so marvellously. Mr. Backhaus told the present writer that he was not aware that his position

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<sup>1</sup> December, 1928.



for this work was unusual, until a friend remarked on the fact. Now it is interesting to note that it is the position justified anatomically for such work, and was used by Liszt, and taught by Deppe and some few other noted pianists and teachers. The value of this position appears to have escaped Mr. Ortmann. He assumes the ordinary position in scales, trills and in rotary movements, and bases his arguments on that assumption. For example, he writes on page 186: "Trills can only be played *tremolo* at a decided disadvantage, which usually affects the tonal result also." This is true when the hand is in the ordinary position. But the best possible conditions for a perfect trill are (1) the hand in scale relation to the keys, (2) the two fingers acting from the knuckle joint, with a superimposed rotary (*tremolo*) movement, and (3) the use of a non-percussive touch.

There are many reasons why the habitual, or even frequent use of a percussive touch should be discarded:

- (a) It actually creates noise: noise which is to music a destructive force. The noise generated by a percussive touch destroys the purity of pianoforte tone.
- (b) This touch makes tone of big intensity harsh<sup>1</sup> and so destroys quality.
- (c) It makes control of key descent difficult. This difficulty in its turn is responsible for that thin tone of small intensity, much clouded by noise, known as a "shallow" or "surface" tone.
- (d) Difficulty of control of key descent obviously makes dynamic control difficult. Pupils using this touch can rarely play *pianissimo* and to get adequate dynamic variation are often driven to that degree of force which robs the tone of its native richness and makes it harsh.
- (e) A tone thus produced chiefly by muscular force does not carry.
- (f) The pianist who uses this touch "strikes" the keys, and strikes with varying degrees of force, thus compressing the hammer-felts unevenly, which makes the touch of the piano uneven. Also the unnecessary vibration of the whole instrument is such a strain on the finer parts of the mechanism that the piano soon becomes worn. Unfortunately we have become accustomed to this abuse of the piano. If an unskilled method of

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<sup>1</sup> See "Sensations of Tone", ? Helmholtz, Third English Edition, p. 78.

tone production obviously and instantly put a piano out of tune it would have some protection. This is not the case. The piano is a defenceless thing. Its delicate beauty is at the mercy of any who choose to strike it.

- (g) The final and most serious charge against a percussive touch is that it has often been responsible for the development of neuroses, several of which have come under my own personal observation.

Facing page 297 in Mr. Ortmann's book are pictures of five arms of varying mass. On page 297 he remarks that "A glance at the pictures will show better than words the great variations in tone produced by arm weight". These pictures show the mass of each arm. They do not show the degree of resistance opposed by the arms to the pull of gravitation (in this case, the pull of the earth), so their weight cannot be judged by a glance at the pictures. If the smallest arm there pictured opposed little resistance to that pull and at the same moment the largest arm opposed a strong resistance to the pull, then at that moment the smallest arm would be heavier than the largest. If both arms opposed equal resistance, then the largest arm would be heaviest, because of the greater mass to be pulled. Many writers on pianism appear not to know that it is possible to acquire skill in controlling different degrees of muscular resistance to gravitation. Nor do they seem to know to what an astonishingly small degree that controlled resistance may be reduced. Mr. Ortmann's statement, then, about the pictures is misleading. It confuses mass with weight. Mass is the amount of stuff in a thing. Physically *weight is pull*. Psychologically it is the effect of kinæsthetic or muscular sensation produced in the mind by the heavy or light condition of the arm. The heavy or light condition is determined by the degree of muscular force exerted in opposition to gravitational pull. The less resistance to gravitational pull the heavier the arm. The greater resistance to gravitational pull the lighter the arm.

Yet Mr. Ortmann, on page 237, writes: "The finger as a compound lever can transmit force to its tip only to the degree that each of its joints is fixed." This statement (true in itself) is in harmony with other passages previously quoted in relation to rigidity, striking keys, *etc.*, all teaching the same obvious error that to play all fast and very loud passages, the playing lever should first be made as *light* as possible and then forced down by a percussive touch with

as much muscular force as possible. Pianists using a non-percussive touch, when playing fast and very loud passages first make the playing lever as *heavy* as possible consistent with skill, and then, with the *finger on the key*, depress it with a quick muscular push, thus achieving greater results with considerably less muscular force. To make the lever as heavy as possible implies possession of the above-mentioned acquired skill. Mr. Ortmann bases his conclusions on the records made by an apparatus which he admits to be inadequate (page 337).

A student would be well advised to think of a heavy arm as a "heavily pulled arm", and of a light arm as a "lightly pulled arm". This will help him in the acquisition of a weight touch. If gravitation ceased to act, neither his arm nor anything else would have any weight at all. *Weight is pull.*

The fallacies discussed in this article need not be further considered. The facts presented are here summarised.

- (1) Skill in playing the piano does not imply skill in teaching the piano.
- (2) Colleges for the training of music teachers in *practical skill* are as necessary as for school teachers, although their establishment probably would be premature at present.
- (3) The confused and often contradictory teaching of many writers on pianism is due to the prevalent practice of partial correlation of the underlying sciences and one or other of the arts of the music teacher.
- (4) Until the necessity of the study of the correlation of *all* the sciences and arts directly concerned in music teaching is widely recognised, confused and often contradictory statements will persist.
- (5) The condition known to music teachers as nervousness arises from a misuse of attention.
- (6) Because it is impossible to give *conscious* attention to more than one subject at once, technique should be made automatic before interpretation is attempted.
- (7) Knowledge does not imply skill. The general rule is, that the greater the facility for the acquisition of knowledge, the less facility there is for the acquisition of skill. It is rare to find both of these in a high degree in the same person.



- (8) A man may have a remarkable facility for the expression of his logical thought in sounds, which he finds it impossible to express in words.
  - (9) The hand position known as *scale* relation to the keys, is justified anatomically and therefore is economical in time and effort.
  - (10) There are two movements involved in key depression, the movement which carries the finger to the key, and the movement by which it is depressed.
  - (11) When the movements are kept separate and the finger *placed on the key* by the first movement, and then depressed by the second movement, the touch will be non-percussive. The tone thus produced is pure, and will be rich and resonant to the degree to which the resistance to the pull of gravitation has been reduced consistent with skill. In a percussive touch the movements are *merged*, the key is "struck" and depressed chiefly by the push of muscular force. The destruction of the beauty of the tone is only one of many evil results of an habitual use of a percussive touch.
  - (12) The term "rigidity" is inadmissible in piano technique. To assert, as Mr. Ortmann does, that "all fast and very loud passages must be played with excess rigidity" is misleading. To play in this condition the playing lever is first made *light* and then used with all possible muscular force. In what is called the weight touch the playing lever is made as *heavy* as possible consistent with skill, then with the finger on the key, it is depressed by a quick muscular push.
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## RATIONAL ABSURDITY IN PRIMITIVES.

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ANTHROPOLOGISTS have been unable to explain satisfactorily how men of more primitive civilisations came to think as absurdly as they do in regard to cause and effect, death, souls, magic, *et cetera*. Lévy Bruhl was struck by the fact that this kind of absurd thought of primitives seemed to obey some law; for though in it rational logical contradiction was tolerated, such contradiction was not deliberate. He concluded that the mind of the native was essentially different from that of civilised man. This conclusion is not correct, as can be seen from what Bruhl tells us about the transition to higher mental types in the last chapter of his book; moreover, Lowie showed that absurdity of thought has existed in man in all countries at all times and in all races.

Bruhl explained the absurdity of thought of primitive man as being governed by and due to what he calls the Law of Participation. He called their absurd thought pre-logical because it tolerated rational contradictions. His definition of the Law of Participation lacks definiteness and is somewhat obscure. What is participated in, according to Bruhl, appears to be the mystical occult properties inherent in objects.

In this paper I will offer a new explanation of the absurd thought of primitive man. It will be shown by reference to a few examples that this kind of thought can be satisfactorily explained if we assume (1) that the mind is infallibly and unerringly logical; and (2) that there is a law of affective identification.<sup>1</sup>

Bruhl was wrong in stating that the mind of the native is of a different nature from ours, but he was right in recognising two forms of thought. In one of these, rational contradiction is ignored but not deliberately sought after as such. This is the rationally absurd thought of ancient and modern man. In the other, rational contradiction is not tolerated.

<sup>1</sup> Freud describes identification as an emotional bond, *i.e.*, a form of purely emotional thinking.

This is the kind of thought we use in science to-day, that is, what we regard as ordinary thinking. The solution here given of the absurd thought of natives raises the broader question: "Is the mind infallibly logical?" Plato, in *Theætetus*, makes one of his characters say that all errors in thought are due to our having thought we knew something when in reality we did not, that is, that all errors in thought are due to errors in apprehension, to errors of fact. If this is true, then this law of the infallible unerring logical character of the mind should be as important for psychology as the law of gravitation was for physics. It must have an important bearing on the theory of cognition and therefore on all philosophies and all psychologies.

Our examination of this subject will consist of three parts, namely,

- I. A brief theoretical discussion.
- II. A few illustrative examples.
- III. (a) Evidence existing elsewhere that proves the mind infallibly logical, and (b) its bearing on the theory of cognition.

## I.

Absurdity of thought is met with in individuals, in the insane, in lovers, in groups of all sorts—groups organised into states, tribes, nations, professions, religions, or societies, or in relatively unorganised crowds. It occurs in myths. It is deliberately aimed at in wit, humour, lying. Absurdity of thought notoriously occurs in primitive man.

Everyone, even the insane, claims to be ruled by logic. When anyone finds he is in error he claims to have been mistaken as to facts. In this view everyone agrees with Plato. Again we say that seeing is believing. Psychology has shown us how erroneous our sensory perceptions may be. The external world is not what it seems to us to be. Psychoanalysis has shown us that the internal world of our own mind also is not what it appears to be. Our first impressions of both the external material world and of the internal world of our mind can be shown to be erroneous. Error in thought may be due to ignorance or to sensory illusions, but they are not the chief cause of such errors as occur in the conditions above listed.

Empirical science, in order to ascertain what the external world is, takes the greatest care to distinguish between sensory and emotional observation, for the two reasons that (a) emotion tends to distort and render inaccurate our sensory perceptions; and that (b) no method is known by which we



could judge with certainty whether the emotional experience of any individual was more valid than that of another. Of course, in life there are standards by which the ordinary man does judge of the validity in reality of emotional observations made by people. For example, a man who delights in cruelty as such is regarded as being in error. While it is not customary to assert that delight in cruelty as such is an erroneous emotional observation, yet in sensory observations sensory illusions (*e.g.*, optical illusions) are often observed and described. We do not see things always as they are, but have learned to correct many of the mistakes of sensory observation.

Several questions arise:

- (a) Is the mind infallibly logical so that all errors in thought are due to erroneous apprehension of facts?
- (b) If so, then apart from mere ignorance or sensory illusion, is emotion the disturbing factor that determines errors in apprehension?
- (c) If so, how is the result, error in apprehension, brought about?
- (d) Is there any other factor that can determine absurdity of thought?

How do errors in apprehension, which give rise to absurdity of thought, occur? If we glance at the conditions listed above in which absurd thought occurs, we notice that in all of them there is emotional excitability. It is popularly believed that absurdity of thought arises from interference with our rationality by emotion.

When those who have been trained in science think of apprehending an object or situation they think only of an apprehension of the objective facts. They school themselves to avoid the distortion of objective facts by emotion. They decide to be strictly logical, strictly "objective" in their observations, to rivet their attention on the material qualities of objects. It is generally recognised, however, that the distinction drawn between an emotional and a sensory observation as being subjective and objective respectively, is philosophically invalid. Both our sensations and our emotions are the reaction of our organism to a stimulus and philosophically speaking are equally subjective. The use of the terms "subjective" and "objective" is therefore apt to be misleading. In this discussion, therefore, the terms "subjective" and "objective" will not be used.

Ideation, then, may be based on sensory or on emotional observations. In material science our interest is riveted on our sensory observations; in æsthetics on observations made

by our emotions. But there is another distinction to be made in our methods of thinking, that between projected and unprojected ideation. Ordinarily, we project our sensory observations on to material objects in the external world, but in abstract mathematics we reason with mere symbols as if they were material objects and refrain from projecting the symbols on to real objects in the external world. Such thinking is purely intrapsychic and remains unprojected until an effort is made to apply its results in reality. So also an emotional observation of beauty may, like colour, be projected on to an external material object and be regarded as a property of the object, say, a beautiful picture. But we may also feel unprojected pleasure or fear and regard these feelings as something in our minds and not as properties belonging to external material objects. The term "objective" is commonly regarded as equivalent to the conception of external reality; the term "subjective" usually is taken to mean "emotional". The accepted method of using the terms "subjective" and "objective" obscures the important distinction between projected and unprojected thought which may exist in either emotional or material thinking.

Psychoanalysis has also made us familiar with the distinction between ideation that is conscious and ideation that is unconscious. Thoughts may be unconscious merely in a descriptive sense when the ideas concerned are readily available to consciousness. Such ideation we understand quite well. Thought that is unconscious in the systematic sense, however, is not easily made conscious. The individual is aware only of the results of such unconscious thought. Psychoanalysis seems to be based upon an assumption that the mind is infallibly logical. To establish this contention in detail would extend this discussion too far. I shall, therefore, assume that repression and the holding back of repressed wishes in the unconscious is always logically justified by the facts as apprehended by the mind (either consciously or unconsciously). It is well known that for repression to be effective the repressing force must also be or be rendered unconscious. The emotional identifications which the mind chooses to make and the decision that certain of them may be admitted into consciousness are the result of the play of the pleasure principle and logic. Freud says that the unconscious knows no "no". All it can do is to wish. There is no need for it to do anything else, for it is omnipotent in the sense that it can always create affective identifications that make the realisation of its wish possible in phantasy if not in fact. Its only business is to find, for the

fulfilment of its wish, a path that is logically permissible. Thus the unconscious though ruled by logic can always evade the facts of reality.<sup>1</sup>

We have to distinguish between:

1. sensory (or material) and emotional ideation (usually termed objective and subjective thought respectively);
2. projected and unprojected or purely intrapsychic ideation;
3. conscious and unconscious ideation in the systematic sense employed in psychoanalysis. Unconscious thought of this kind is always unprojected, that is, purely intraphysic.

These distinctions in method of thinking will now be discussed more fully to show exactly how absurdity of thought arises.

a. The mind observes and apprehends objects not only materially but also emotionally. For example, we often classify or describe persons, landscapes, or other things not according to their material qualities but according to the emotion they produce in us. The organ of observation we use is our emotions, and we regard any two objects that cause the same emotion as equal or even as identical. So long as we are fully aware of what we are doing, no absurdity of thought results. If, however, we confound for any reason emotional equalities or identities with material equalities or identities, absurdity may arise. For example, during the war, some people identified with a German anyone who had a German name or who expressed in any way admiration for the Germans. This was often absurd in fact.

We may regard two objects that cause the same emotion as equal or as identical. What determines whether we regard them as one or as the other? If our ideation remains projected on to the objects, say, pictures, they are thought of as equal: if our ideation ceases to be projected the ideas or feelings of the pictures become identical. Compare mathematical thought in which  $x$  stands for an indefinite number of

<sup>1</sup>It is noteworthy that the primary form of thought was emotional. Emotion appeared in consciousness before ideation as is evidenced by what we see in infants, and also in the ascending development of mind in the animal kingdom. The first ideas to appear in consciousness were ideas of concrete movements, situations, objects. When these concrete ideas arose in consciousness they were classified not on a material but on an emotional basis. Primarily and essentially, thought is emotional. Our rational scientific thinking is regarded, genetically, merely as a special form of the original form of thought. Consciousness of ideas or of emotions results from frustration. If there is no obstruction to an emotional discharge the emotion is unconscious. The vasomotor and other movements that accompany an emotion do not cause the emotion but discharge and relieve it, and therefore the consciousness of it. A form of thought that thinks in feelings, not in ideas, exists and this form of thought is primary: this view, if not explicitly stated in these words, seems to be implied by Freud: if it is not borne constantly in mind in reading this paper the reader may be confused.



material objects. They are all identical in such mathematical thought; for though it has the characters of sensory ideation it is quite unprojected.

Absurdity of thought in this discussion means that conclusions or perceptions are reached which the individuals concerned believe to be true, but which, for the unprejudiced observer, are obviously contradicted by material fact. In the unprojected abstract thought of the relativity theory, the conclusion is reached that space is finite. When the result of this thought is projected it is at once felt to be absurd, and the feeling of absurdity is due to an emotional observation. Mathematical thought has the characters of unprojected sensory or material thought. In such thought all the objects symbolised by  $x$  are not only equal but identical. This identity of objects disappears as soon as the results of unprojected mathematical thought are projected on to the material world. When the solution of the problem in mathematics finds that  $x$  is 6 or -6, the only possible solutions are not equalities but alternatives, even in unprojected thought.

b. Not only do we thus classify and identify objects according to the emotion they stir in us, but in ordinary life we frequently identify an object with the emotion it causes. For example, a husband calls his wife "my love" or a young woman speaks of a would-be lover as her "pet aversion". No absurdity results so long as we are clearly aware of what we are doing under such circumstances. But if the young woman were terrified at her hate and acted as if by killing the would-be lover she would get rid of her hate, her action would be absurd. In real life, such a method of getting rid of unwelcome emotion is commonly acted upon as if it were valid in reality. The wealthy Jew got rid of the pity inspired by an unfortunate mendicant by saying: "You break my heart, get out or I'll kick you out." How this absurdity arises we will see later. If we were to make a similar identification in sensory or material apprehension we would say that a rubber ball was identical with the sensations to which it gave rise in us.

c. Closely allied to the fact that the mind may identify an emotion with the object that causes it, is another one, namely, that the only way in which we can express in words an individual specific emotion is to describe in detail the concrete facts that give rise to it. If I say "I am horrified", you know a little; if I say: "My hair stands on end", you know more; but when I say: "I feel as if my head were in a lion's mouth and its jaws were about to snap on it", you know what I feel.

This fact is of great importance: it is the rational basis for the technique of free association used in psychoanalysis. Free associations are the description of the patient's emotions in the form of concrete facts.

Therefore we can say that the human mind has two sets of organs by which it perceives and so apprehends. (1) the senses; (2) the emotions (including *Einfühlung*, intuition, *et cetera*). The exercise of either method of apprehension, the material or the emotional, creates no absurdity; but as soon as we regard emotional identifications as valid in reality, absurdity of thought may arise. The converse is also true. If because two women were physically the same they were accepted as having identical emotional value by a man, the absurdity of his conduct would cause trouble.

d. Equalities or identifications are proved by use of the Aristotelian logical axiom: "Things that are equal to the same thing are equal to one another." To be logical means, in this paper, to possess the ability to reason from this axiom and to recognise that a cause precedes an effect. If in sensory or material apprehension  $A = B$  and  $B = C$ , then  $A = C$ . So, in subjective or emotional apprehension, if one picture causes the same emotion as a second picture, then the first picture equals the second picture. If the artist who painted the pictures also creates the same emotion as his pictures, he equals them. Equalities that logically result from an emotional apprehension may therefore be absolutely false in material apprehension. An artist is not in fact the pictures he has painted, even though he causes the same emotion as they do. Emotionally apprehended, he may equal any picture he has painted. There seems to be a strong tendency for emotional observations to be or become unprojected. We are apt to say of a number of people or pictures that they are all the same, that is, identical, if they cause the same emotion. I know a woman who says that a philosophical argument is the same thing to her as a kitten chasing its tail. When projection of ideation ceases, equalities become identities. The literal way in which these emotional identifications are, under certain conditions, apprehended by the mind as absolutely valid in reality is best seen in the thought of primitive man.

The mind of primitive man frequently, when it apprehends emotionally, identifies as being the same thing two objects which perhaps are grossly dissimilar in material properties. If a similar process occurred in sensory apprehension we would declare that two rubber balls which were of the same weight, elasticity *et cetera* were not only equal, but

were one and the same identical ball. If in apprehending these balls we ceased to project our sensory impressions on to the outer world both balls would be identical and identical with the sensations they caused.

In emotional apprehension, then, the Aristotelian logical axiom remains true as it stands, for three pictures that cause the same emotion are emotionally equal when we project upon them the emotions they cause. Emotional apprehension and thought display a greater tendency to lose the projection on to material objects or to arise in an unprojected way. The modification of Aristotle's logical axiom, made necessary by the cessation of projection, is of special importance in emotional apprehension. In unprojected emotional ideation the axiom takes this form: "Things, situations, objects that produce the same emotion are identical with one another and with the emotion they produce." Thus, if A is E and 2 is E, then 2 is A. In this formula A and 2 are two material objects which cause the same emotion, E. The fact that they may be grossly dissimilar in material properties is indicated by using the symbols A and 2 instead of A and B.

In unconscious unprojected emotional apprehension, therefore, not only is the basis of classification emotional but the fundamental logical axiom of Aristotle is modified by the fact that here equality is apprehended as identity. This is not an abrogation of the fundamental logical axiom of Aristotle but a special case of it. Such apprehension though true emotionally may be false materially. Two objects grossly dissimilar in material qualities may, emotionally, be identical. Emotionally, therefore, the same object may exist in two dissimilar forms in two places at the same time. No confusion of thought arises, however, so long as we are clearly aware of what is taking place in our minds; so long as we clearly distinguish between what is observed by the senses and what is observed by the emotions, between projected and unprojected thought.

e. But our empirical observations may sink into the unconscious where all direct contact with reality is lost, where projection of ideas or feelings does not exist. In that region, ideas of concrete objects, however dissimilar those objects may be in material fact, are identified with each other if they cause the same emotion, and are identified with the emotions to which they give rise. If the emotional factor is sufficiently strong, then, when these identifications, or the logical conclusions unconsciously drawn from them, emerge into consciousness, they have the strength of convictions which display



a remarkable power of being impervious to the rational contradiction which may exist between themselves and material fact.

It is the temporary residence of ideas and feelings in the unconscious that permits absurdity of thought to arise. Absurdity of apprehension (apart from mere ignorance) is due to our being unaware how we arrived at such identifications. What happens is that an identification of material objects which are materially different appears in consciousness as a conviction which is accepted by consciousness. This identification can withstand the force of criticism implied by its contradiction of material fact, owing to the strength of the emotion associated with its formation and with the process of repression.

f. In emotional thinking abstraction and generalisation occur just as in objective or material thinking. In different connections material thinking may regard a piece of wood as a lever, a chemical substance, a weapon, or an electric insulator. So for emotional thinking, a thing may be identical with one object in one connection and with another in another connection. Lévy Bruhl has shown this in his "Law of Participation". Owing to abstraction of a particular aspect of the emotions associated with two different objects, an identification of two objects may be made, although the whole of the emotions created by each object are not identical. It suffices that there be a common element of emotion which can be abstracted by the mind in order to arrive at an identification.

Since the mind in emotional intrapsychic or non-projected thinking is directly swayed by the pleasure principle, it is omnipotent and can arrive at any conclusion it desires to make. Yet in so doing it is limited as to the means by which it reaches conclusions by the inherent infallibly logical nature of the mind. Affective identifications in the unconscious that have the strength of fixed convictions (the fixations of psychoanalysis) are taken as a basis of fact for logical thought.

g. Absurdity of thought is due, not to ignoring the logical axiom, but to an error as to facts arising through emotional identifications that are formed unconsciously and emerge into consciousness. The logical process may be stated thus: A is E, but it is also true that A causes E. So also A is 2. It follows by the logical axiom of Aristotle that A causes 2. That the result may be erroneous in material fact is due to the mind having accepted intrapsychic emotional identifications as valid in the material world. It is because the affective identifications are made unwittingly, or unconsciously, that the confusion due

to such identifications with objective identifications is made possible. When emotional identifications come thus to be regarded as valid in reality we can arrive at extraordinary results. For example, if seven or more different objects cause the same emotion, any one of them may be regarded as the cause of any other one of them.

*h.* Before dealing with examples of absurd thought in primitive man I would point out that man is social. A pre-social man never existed. Man, therefore, is always a member of a crowd, using the word crowd to include organised crowds like tribes, nations, religions, armies. Not only is emotion heightened by active membership of a crowd, but human crowds, especially if organised, always take steps to heighten artificially the emotions connected with those ideas that give permanence and cohesion to the crowd, that is, those ideas on which the existence of the crowd depends. In our moral education we do this, and primitive man did the same thing in his initiatory rites. A condition of mental anguish was produced in the initiate, and when he was in this state, the secrets of the tribe on which its existence depended were communicated to him. The chief method employed by man to secure uniformity of emotional apprehensions has been the inculcation of certain religious or mystical beliefs or attitudes into a group. What and how a man thinks is largely dependent on social heredity, on traditional public opinion, that is, on the social environment into which he is born. This social environment exists before he is born and survives his death; yet it exists really only in the minds of individuals. For example, though it is inherent in man's nature to have a conscience, conscience is the traditional public opinion with respect to morals. There is, therefore, no hard or fast line between individual and social psychology. Primitive man has a poorly developed sense of individuality. He is before all else a member of a crowd. In considering his thoughts we must remember that he is born into a world in which through public opinion he affectively identifies many objects that are grossly dissimilar in material qualities. For example, a man is his totem animal, that is, public opinion causes his totem animal to create in him the same feeling as he himself does. He feels that he exists in two grossly dissimilar forms in two different places at the same time. Von Steinen could not understand how the Boreros of Brazil believed that they were red *arras* (*Parakeete*) and man at the same time.

## II.

Here are some examples of absurd thought in the primitive, all taken from Lévy Bruhl's book, *How Natives Think*.

1. In the New Hebrides a turtle came ashore and laid a nest full of eggs. The event was unique in the experience of the natives just as the arrival of Christianity had been. The right thing to do, therefore, was to offer the turtle to the missionary since he was the cause of its arrival. The arrival of Christianity was unique, the turtle's behaviour was unique.

Both these events were and caused the emotion due to a unique event. But the natives reasoned thus: The arrival of Christianity caused the emotion due to a unique event; the emotion due to a unique event *was* the turtle's behaviour. Therefore, the arrival of Christianity caused the arrival of the turtle. How literally the result of this reasoning is accepted is shown by the fact that the turtle was offered to the missionary.

2. In New Guinea a man is returning from fishing with an empty bag, wondering who has bewitched his nets. He raises his eyes and sees a member of a friendly village on his way to visit him. He kills the visitor as the sorcerer to whom his bad luck is due.

In this case the emotion due to bad luck at fishing was intense. His bad luck caused the same emotion as if someone had bewitched his nets. This same emotion of anger was caused by his seeing the friendly native when the fishing bag was empty. The reasoning is: The friendly native caused an emotion of anger because he saw the empty fish bags. The same emotion *was* the bewitching of the nets. Therefore the friendly native caused the bewitching of the nets.

The usual explanation given for this kind of thinking is that it is due to a defect in logical power, but when we find that the primitive will at times say that the cause of an event succeeds in time the effects it produces, we are quite puzzled, and realise that we do not explain the naïve thoughts of the primitive by calling them "childish".

3. In North America Jesuit priests report that the natives saw the lunar eclipse in 1642 and said that they were no longer surprised that the Iroquois had slain so many of their people during the preceding winter. They saw in the eclipse, said the missionaries, the omen or sign, but somewhat too late to take precautions. Here the destruction of many members of the tribe by the Iroquois *was* an emotion of fear which continued after the event. The eclipse of the moon caused an



identical fear and therefore caused the slaughter of the tribe during the preceding winter: the slaughter *was* the emotion.

4. Here is another example of effect preceding its cause in time. In 1888, Namoa, the chief of Mabuig, once boasted that he was always successful in hunting dugong. One day soon afterwards he not only failed, but the next day broke his harpoon. Shortly after that he was made happy, for he discovered the cause of his bad luck: three or four days afterwards a baby died in the village and then two women.

The reasoning here is clear: The deaths caused a depressing emotion; this depressing emotion *was* his bad luck in hunting dugong; therefore the deaths caused his bad luck, even though it had occurred three or four days earlier than the deaths. In this instance we are informed that the emotion due in fact to the first event continued until the second which came to be regarded as the cause. No doubt the same remark applies to the case that preceded this one.

Freud says that time does not exist for the unconscious. By this he means, no doubt, Time is an external thing, for unconscious mental processes take time to occur just as digestion of our food takes time. So though the unconscious ignores time as external, it, in a sense, keeps its own internal clock.

If the explanation of the absurdity of thought of natives is merely lack of logical power causing, for example, the *post hoc ergo propter hoc* fallacy, how can we explain that the Ja Lao in British East Africa cannot recognise that daylight sky is caused by the sun? These natives regard the daylight sky as in no way connected with the appearance of the sun, and have asked what became of it at night. We can see sense in their beliefs only if we assume that the daylight sky and the sun gave rise to totally different emotions in them and so were regarded as quite unrelated. The reasoning is as follows: Daylight sky causes one emotion; the sun causes quite a different emotion; therefore the daylight sky and the sun have no causal relation between them.

5. Here is another example which shows how the naïve logic of *post hoc ergo propter hoc* is not a satisfactory explanation for this kind of thought. Dobrizhoffer tells us of the Abipones, that though a wound from a spear gapes wide enough to kill a man, yet, if the man dies, his death is due to the arts of jugglers. To us the relation of cause and effect seems obvious. A spear and death caused different emotions in these natives and therefore are unrelated causally in their minds. It is worth while telling more about this native view of death due

to spear wound. The jugglers who cause the death can be banished from among the living if, immediately after death, the heart and tongue of the dead man are removed, roasted and given to the dogs to eat.

Here the reasoning would appear to be as follows: Jugglers cause an emotion of mystery; death, the ceasing of the heart to beat and of the tongue to speak, is the emotion of mystery; therefore the jugglers cause the death. The heart and the tongue must be removed from the dead immediately he is dead, because it is at the moment of dying that they create the feeling of mystery identical with what jugglers create. If time is allowed to elapse the emotion of mystery passes off from the minds of the spectators. This is equivalent affectively to an escape or departure of the jugglers from the tongue and heart of the dead man. Though no jugglers are ever seen to die, this custom continues. This imperviousness to experience is characteristic of absurdities arising from a confusion of material (or objective) and emotional (or subjective) identifications. There is, of course, no need for any external evidence that any jugglers have died. The roasting of the tongue and heart and its consumption by the dogs created the same feeling as the banishment of the jugglers from among the living would cause, and therefore *was* the death of the jugglers. The natives could be certain the jugglers had been killed because they were certain that they felt as if they had been killed.

### III.

In primitive languages there are various words, *mana*, *tapu*, *taboo*, *wakan*, *orenda*, which have been translated by the word "sacred". Anthropologists have wondered why these words were used as nouns rather than as adjectives. They have asked: "Do these words mean something that exists *per se*, or are they merely very general predicates?" Or again, "Are they names for a universal spirit, or for a large number of different souls or divinities?" These questions are wrongly posited.

In the kind of thought that these words express there is no distinction between the emotions caused and the thing that causes them, between the emotional quality of a thing and the thing itself. If a thing is taboo it is absolute taboo, so that the distinction made by Plato between the absolute idea and the sensible object, ceases to exist for the very good reason that the object is the absolute idea.

Mr. Merrylees, in his discussion of Plato's participation theory,<sup>1</sup> says: "Whether Plato himself used the word 'good' to stand for that whole organisation or interrelation, or only for the objective side of it, is perhaps not quite clear from his dialogues, though if we speak of participation in the idea of Good (as I think he does intend us to), it would not seem logically possible to restrict it to the objective side, for in the 'good' subject and object are one".

Mr. Merrylees is of the opinion that here the quality and thing must be regarded as identical, "that by implication the term idea has, in a sense, become fluid". Incidentally it is also of interest to note that in discussing psychological hedonism in the same journal,<sup>2</sup> Mr. Merrylees claims that psychological hedonism cannot be true unless pleasure and the aim of pleasure are identical. This condition of identity of an emotion with the object that causes it is exactly what we have found is true in intrapsychic emotional thinking and even sometimes in projected emotional thinking, as for example, when a man calls his wife "my love".

The few examples of absurd thought in primitives that I have given suffice to show how the absurd thought of primitive man may be explained without assuming that the mind can make any logical mistake. The same thing can easily be demonstrated in connection with all the absurd beliefs of primitive man, his superstitions, his belief in magic and sorcery and his beliefs concerning life, death, birth, the soul, totems and so on.

But not only is this so, for it can be shown that all the characteristics of the absurd thought described as occurring in our unconscious by Freud, are, with one exception, logical corollaries of the laws of affective identification and of infallible logic. The exception is the fact that time as an external fact is ignored by the unconscious. The characteristic seems to be related to the fact that unconscious thought being purely intrapsychic has no direct contact with reality. The method of thought used by the unconscious leads to identifications which render possible any rational logical absurdity, and hence by giving rise to all kinds of errors in apprehension may give rise to any rational logical fallacy. The similarity in nature of all absurd forms of thought is well known. All these forms of absurd thought can be explained in the same way as can the absurd thought of primitive man, and the fact that a

<sup>1</sup> *Australasian Journal of Psychology and Philosophy*, Vol. VII, No. 1, page 49.

<sup>2</sup> *Ibid.*, Vol. X, No. 2.



similar explanation of them is true, is repeatedly demonstrated in the analysis of the minds of patients.

Therefore we may conclude that those who have implied or claimed that the mind is infallibly logical may be correct: Plato implied that all errors in thought were due to errors in fact. Freud has said that the patient is always right if we only understand him correctly. Psychoanalysts speak of the curious logic of the unconscious. Le Bon in *Les Croyances* speaks of emotional logic. Everybody, including the insane, is convinced that he is ruled by logic. Practical analytical observations of the human mind confirm the view that the mind is infallibly logical. The writings of psychoanalysts imply that the mind is infallibly logical.

If the findings made in this paper are correct, then the technique of psychoanalysis has a rational basis in that free associations are essentially a description of emotions in the form of concrete fact. I hope to show later that the findings made in this paper should enable us more easily to correlate the work of psychoanalysis with that of workers in cognate fields, such as traditional psychology, philosophy and ethics. Besides these things, new light should be thrown on the theory of cognition as Lévy Bruhl stated. This question is also raised: If the mind is infallibly logical, can an empirical science, based not on sensory observation but on empirical observation by the emotions, be developed? If it can, we should be able to establish a body of knowledge concerning "subjective facts" which all skilled observers would recognise as correct. This body of knowledge would serve as a standard of reference similar to that which exists at the present time in material science. At the present time we get universal agreement in regard to material observations but wide disagreement in emotional observations. In material science we use well known methods of checking up our observations. In emotional observations we endeavour to secure unanimity of opinion by inculcating a particular religious or mystical belief or attitude.

This method can produce unanimity of emotional observation in one group but produces diversity of emotional observation between the different groups so formed. But is the difference in observations made by these groups as real as it appears? For example, science tends to identify religion and philosophy with a tyrannical bloody persecutor, while religion and philosophy tend to identify science with our repressed impulses. Yet Freud has said in *The Future of an Illusion* that the difference between him and a religious man is perhaps

not really so great after all, since both believe in the brotherhood of man and the relief of suffering.

We must remember that the only method by which a specific emotion can be expressed in words is by a description of concrete facts, real or phantasied. To understand, therefore, any religious or political dogma, we must ask, not what it means in a material sense, but what feeling it expresses. The feeling behind it equals a purpose and a philosophy. If we can get at this feeling, purpose and philosophy, perhaps we shall find that the emotional observations of man are as constant as his sensory observations.

Science has always taken or finally arrived at an anthropomorphic view of the universe. In the pre-animistic and animistic stages of science this part is obvious. Sir James Jeans points out that scientists now recognise that the mechanical conception of the universe associated with the Newtonian era is anthropomorphic. He claims that the relativity theory is of a different nature; but he admits that the universe can in the relativity theory be conceived of only as a mental concept. All this is to say that the universe to the pre-animist was a unity of body and soul, to the animist a duality of body and soul, to the materialist a machine like his own body, and to the relativist a thought like his own thought. Science at all times and in all ages therefore has identified man with the universe.

Modern philosophy regards the universe as an organism.<sup>1</sup> This is a return to the ideas of Plato. We find the same thing in totemic communities where all objects in the universe are classified according to the totems of the tribe. Behind all these three systems there is an identification of man with the universe. The same thing appears in the oceanic feeling of religious experience discussed by Freud. Melitta Schmideberg, as a result of analysis of children, has concluded that before a child identifies itself with its mother it identifies itself with the universe.

Not only does man thus universally identify himself with the universe but also with his fellow beings. Freud has shown that there occurs identification of one member of the crowd with the other members of it. Social feeling is based on identification of individuals forming social groups. The man in the street says: "How would you like it done to yourself?" That is, he frames his moral judgments on a basis of identification with his fellows.

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<sup>1</sup> See Whitehead.

Would it therefore be too much to say that the devotees of science, philosophy and religion all emotionally observe the universe and their fellows as identical with themselves. This statement of an emotional observation is therefore to be regarded as true emotionally because universally made, but is it not true in a material sense? If the mind is infallibly logical many important conclusions must result from this observation—a logical basis for morality is inherent in it. On this observation can be built up a happy unified personality possessing social power and utility.

It cannot be denied that our emotional observations mean more to us than do our material observations. If the welfare of humanity depends on intelligence and discrimination, it follows that we must discriminate between material and emotional observations and no longer ignore our emotions as an organ of empirical observation; but in addition to recognising the nature of our emotions, we must develop a method of checking their validity similar to the method we use in checking material observations.

The law of talion follows logically from the emotional observation of identification with our fellows. To what extent increasing power of emotional and intellectual differentiation leads logically to a replacement of the law of talion by the Christian doctrine of love, is a question worthy of our consideration. We have yet to see defined more precisely in what sense the Christian doctrine of love can be asserted to be true, and we have yet to define as precisely as possible to what extent and in what way exactly it can be shown to be emotionally true that a man should logically love himself and his neighbours, and in what way should he be logically driven to hate, if at all, either himself or his neighbours. A full consideration of the validity of the emotional observation of identification of a man with his fellows and with the universe is impossible without unduly lengthening this essay. Attention is here drawn to it and to its logical corollary, the law of talion and the law of love to illustrate the kind of generalisation that may be arrived at if a science were based on empirical emotional observations checked in a way similar to what we employ in sensory observations or material science.

Literature: I have to acknowledge my indebtedness to psychoanalytic literature generally and to various works and authors, including the following:

Freud: "Group Psychology and Analysis of the Ego." (For identification.) "The Future of an Illusion." (For oceanic feeling.)



M. Wulff: "Über den zeitlichen Verlauf unbewusster Vorgänge." In *Imago* XII. Band, Heft 4.

Melitta Schmideberg: "Persecutory Ideas and Delusions." *Internat. Journal of Psychoanalysis*. Vol. XII, page 34. (Reality is equated with the child's own body.)

B. H. Lowie: "Are We Civilised?" Geo. Routledge & Sons, London.

Lévy Bruhl: "How Natives Think." Alfred Knopf. New York. (To this book I am deeply indebted.)

R. M. Freienfels: "*Irrationalismus; Umrisse einer Erkenntnislehre.*" Leipzig, 1932. Felix Meiner. (The late Professor Dunlop kindly referred me to this book when I discussed the question of affective cognition and infallible logic with him.)

Sir James Jeans: "The Mathematical Aspect of the Universe." *Philosophy*, Vol. VII, No. 25. (In this Whitehead's philosophy of organism is discussed.)

Burrell: "Man the Measure of all Things." *Philosophy*, Vol. VII, Nos. 25 and 26. (In this Pato's views on cognition are discussed.)

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## REVIEW ARTICLES.

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### HUSSERL'S PHENOMENOLOGY.<sup>1</sup>

(I.)

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DR. W. R. BOYCE GIBSON has rendered significant service to philosophers of the English tongue by translating into their own language Edmund Husserl's *Ideen zu einer reinen Phänomenologie und Phänomenologischchen Philosophie*. All who have struggled with the difficult German of the original will be grateful for this translation which, while keeping near to the German text, yet exhibits the translator's own characteristic ease, flexibility and charm of expression. The content of the volume is so important as to call for more than the customary review or review article, and I propose in a series of contributions to discuss, in its main features, the thought of the book. In doing so I shall refer to certain more recent writings of Husserl, in particular *Formale und transzendente Logik*, which appeared in the *Jahrbuch für Philosophie*

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<sup>1</sup> "Ideas: General Introduction to Pure Phenomenology." By Edmund Husserl. Trans. by W. R. Boyce Gibson. George Allen & Unwin, London, 1933. Price 16s.

(Vol. X, 1929), and *Méditations Cartésiennes*, a translation into French by Mlle. Pfeiffer and Dr. M. E. Levinas of Husserl's expansion of four lectures which he delivered at the Sorbonne in the year 1929 under the title *Einführung in die transzendente Phänomenologie*.

This first article is introductory and is intended to prepare the way for the elucidation of Husserl's method. He himself describes the task of the *Ideas* as that of establishing a science of the eidetic essence of transcendental subjectivity, and in the *Méditations* he declares that the inherent tendency of all genuine philosophy is to become a truly autonomous science. He thinks that this tendency involves a radical return to the pure *ego cogito*. The exploration of the realm of subjectivity which such a return opens up by a method peculiar to philosophy provides a task in the doing of which philosophy can follow its own tendency and achieve independence. It may help us to enter into Husserl's point of view if we recall Ward's treatment of Self-consciousness in the *Psychological Principles*. In the course of his discussion Ward evolved a distinction between the empirical Ego, the Me, and the pure Ego, the I. The empirical Ego falls on the object side of the ultimate subject-object relation. It is a system of mental and bodily processes belonging to the presentational continuum and is thus object, although, in so far as it is mental, object into which spatial relations do not enter, or which does not enter into spatial relations. The empirical or psychological Ego is, however, related to the pure Ego, the I, the relation from the side of the pure Ego being the peculiar one of autonomous creation or enactment. The pure Ego is "the thinker of all our inmost thoughts, the doer of all our very deeds—no longer any presentation of self, but the self that has these and all other presentations". Ward points out that it is logically impossible to identify the I and the Me, for, *ex vi terminorum*, that is to identify subject with object. Further, the I cannot be both knower and known, if knowledge connotes object. That being so, on what grounds may Ward assert the existence of the pure Ego, and what path can he find to its nature? We have, Ward declares, no immediate knowledge of our self as pure Ego, but we are logically bound to posit its existence; further what we are bound to posit discloses its nature, if not to immediate, yet to reflexive knowledge. The I synthetically constructs the Me; the Me is open to reflexive analysis, and the nature of the I discloses itself through the nature of that which it has constructed. Let Ward speak for himself: "What justification is there for calling the Me a 'reflexion' of the I if this, the subject of experience, is, as

knower, precluded from being immediately known? Is it not like talking of ideas as copies of originals when it is impossible to compare them with the originals? But no, the cases are not similar. There the impression was a 'sense-datum' passively and privately received, here reflexion yields an 'intellective system', a 'notion', as Berkeley termed it, actively and socially achieved. There the original was another being; here it is my own being. The existence of that might be denied, but the existence of this is indubitable; for if the existential proposition, I am, were false, it could not be asserted." His position is that, though lacking immediate knowledge, I may have impregnable certainty, of my self-existence as pure ego. This certainly is logical or intellectual, grounded in the inviolability of thought's own laws of intelligibility.

This short survey may have served to bring to view the following points in Ward's setting and treatment of the problem which are relevant to our attempt to define Husserl's stand-point:

1. The empirical Ego or Me points back to the pure Ego or I by whose autonomous creation and enactment it is synthetically constructed.
2. Of this pure subject we can have no immediate or direct knowledge.
3. We are intellectually bound to admit that the pure subject exists, and we are able to say what its nature is because we have knowledge of what it produces.

Husserl would accept, with his own interpretation, the first statement; he would reject the second; his attitude towards the third will disclose itself as we proceed. In following him in his development of the first two points we shall find the most important features of his thought disclosing themselves.

The distinction between the empirical self and the pure or transcendental subject pervades Husserl's thought, and the distinction is for him not one of phases, not a logical one; it is between two realms or domains of being of which the one is radically different from the other. Pure subjectivity differs from empirical as the constituting from the constituted, as absolute being from phenomenal, as the necessary from the contingent. Knowledge of the one requires a stand-point fundamentally different from that which knowledge of the other demands. No matter how far we journey in pursuing knowledge of the empirical, we shall never come to the portals of the other domain, the realm of purified subjectivity: "from the natural stand-point nothing can be known but the natural



world". Entrance to the domain of pure subjectivity is conditioned by our starting anew from a completely reversed point of view. The empirical Ego with its psychological processes falls within the natural world. Thus Husserl writes in the *Ideas*: "I, the real human being, am a real object like others in the natural world. ('Real' in this connexion is equivalent to actual, factual, empirical in the usual sense of these terms; it is a term to express meaning appropriate only to the natural stand-point)." "We must", he tells us, "convince ourselves that the psychical in general in the psychological sense, that psychical personalities, psychical properties, experiences or states, are empirical unities, and are therefore, as realities of every kind and degree, mere unities of an intentional 'constitution'—in their own sense truly existing; intuitable experienceable, and on empirical grounds scientifically determinable—and yet 'merely intentional' and therefore merely relative." In the *Méditations* he points out that as natural man, this human being, psycho-physical unity, the Ego is object of such positive or objective sciences as biology, anthropology, and empirical psychology. The psychical life of which psychology speaks has always been conceived as psychical life *in the world*. Psychology may analyse this psychical life in its own internality, in abstraction from that in the world to which it stands empirically related, but the disclosure of that internality does not in any sense lift this psychical life out of the world of which it is a real constituent.

The existence of all empirical unities which may also be described as unities of meaning, presupposes a sense-giving consciousness which is not dependent in its turn on sense bestowed from another source. Husserl maintains that the whole natural world, including the psycho-physical Me, exists only for or to a transcendental Ego or pure subject. Experience, including what the psychologist names subject-experience and also the world which is object of this subject-experience and into the system of which as object science seeks to penetrate, owes its existence to the constitutive synthesis of the pure Ego. This Ego or subject has its own 'lived states', its own stream of constituting experiences. In my life as transcendental Ego I constitute all that can ever be object for me, I am the subject of all constitution in general: I, as transcendental Ego, am auto-constitutive, I also constitute the natural world, including myself as psycho-physical unity, which is object for me. The life of this subject of all constitution, a life which Husserl also speaks of as pure consciousness and again as pure subjectivity, is the

completely self-constituting realm which transcendental phenomenology investigates, and from its own point of view. All positive sciences are '*weltlich*', transcendental science is '*nicht weltlich*'.

We might now proceed to an exposition of the method of this science, but as a further preliminary it seems desirable to dwell on the cognate notions of intentionality and constitution which are so prominent in Husserl's thought. The thesis that consciousness is in its very nature intentional is central. He relates it to the work of Brentano. In his *Psychologie* (Buch II, Cap. i, s. 115) Brentano seeks to mark off the domain of Psychology from that of the physical natural sciences, and hence searches for a criterion by which to distinguish psychical from physical phenomena. He finds such a criterion in intentionality which he takes to be the distinguishing mark of psychical phenomena. His own statement is: "Every psychical phenomenon is characterised by what the Scholastics of the Middle Ages called the intentional immanence of an object, by what we would call, although the expressions are not altogether unambiguous, relation to a content, direction on an object, immanent objectivity. Every psychical phenomenon, although not every one in the same manner, contains something in itself as object. In a presentation (*Vorstellung*) it is something presented (*vorgestellt*), in a judgment it is something accepted or rejected, in love the loved, in hate the hated, in desire the desired, and so on. This intentional 'Inexistenz' exclusively characterises psychical phenomena. No physical phenomenon shows anything like it. Therefore, we may define psychical phenomena by saying that they are such phenomena as intentionally hold in themselves an object." Brentano is here concerned with psychical phenomena; he is moving on the plane of what we have observed Husserl to describe as that of the natural stand-point. The phenomena are the facts of empirical psychology. In this connexion, therefore, the assertion of the intrinsic intentionality of consciousness would seem to mean no more than the perhaps more familiar statement that every subject experience implies an object experience and *vice versa*, that to be conscious at all is to be conscious of something, that psychological analysis discloses in every and all experiences, subject-object in relation. The relation is peculiar to the unity which we call experience. An actual thought, for example, as experience process, relates itself within experience to something thought. This something is, within experience, to or for the subject process in the relation of grasped to grasping. This relation is not to be

described in terms of any of the relations which we find between one 'grasped' and another 'grasped'. The grasped is not in, outside, or indeed in any spatial relation to the grasping, although the very terms which we are now using harbour in themselves the spatial metaphor. Neither is the grasping before or after or merely simultaneous with the grasped; nor is one the cause of the other in the sense in which one object is thought to be the cause of another. The elucidation of the relation in its uniqueness must be, from the point of view of the relation as lived and the terms used to express it, appropriate to the nature of the relation as lived. The term intentional is the one which Brentano has chosen in order to distinguish it. Husserl borrows the term but claims to have given it a meaning beyond that to which Brentano confined it. For Brentano the intentional relation was in the domain of psychical phenomena; Husserl as phenomenologist is not primarily concerned with phenomena in that sense but with pure 'phenomena', the acts of pure or transcendental consciousness, and the intentionality on which he dwells belongs to these 'phenomena'. He regards this advance upon Brentano's position as of first importance, consequently it may be allowable to give two rather long quotations. The first is taken from the *Ideas* (pp. 119-20). "It belongs as a general feature to the essence of every actual *cogito* to be a consciousness of something. . . . All experiences which have this essential property in common are also called '*intentional experiences*' (acts in the *very wide* sense of the Logical Studies); in so far as they are a consciousness of something they are said to be '*intentionally related*' to this something. We must, however, be quite clear on this point that *there is no question here of a relation between a psychological event—called experience (Erlebnis)—and some other real existent (Dasein)—called Object—or of a psychological connexion* obtaining between the one and the other *in objective reality*. On the contrary, we are concerned with experiences in their essential purity, with *pure essences*, and with that which is *involved in* the essence '*a priori*', in *unconditional necessity*. That an experience is the consciousness of something; a fiction, for example, the fiction of this or that centaur; a perception, the perception of its 'real' object; a judgment, the judgment concerning its subject-matter, and so forth, this does not relate to the experimental fact as lived *within the world*, more specifically within some given psychological context, but to the pure essence grasped ideationally as pure idea. In the very nature of an experience lies



determined not only *that*, but also *whereof* it is a consciousness, and in what determinate or indeterminate sense it is this." The second quotation is from the *Méditations* (pp. 27-28). Husserl is here dwelling on the difference between the psychological and the transcendental phenomenological investigation of consciousness. In the first we have data which belong to the "world", to the world posited as existing, data conceived as physical elements of man, the psycho-physical individual; in the second we take no account of the "world", entertain no belief as to its existence—such belief is placed out of action. He goes on to say that if we avoid the confusion of the two points of view, "another point of decisive importance remains. (It plays, moreover, *mutatis mutandis*, a rôle quite as important in the domain of natural experience, *psychology of actual consciousness*.) It is something which the placing out of action of belief in the existence of the world cannot change: the multiple *cogitationes* related to the "world" bear *in themselves* this relation; thus, for example, the perception of this table is, before as after, perception of this table. Thus, in general, every state of consciousness is, in itself, consciousness of something, be the real existence of this object what it may, and whatever abstention I may practise, in my transcendental attitude, from positing this existence and all the acts of the natural attitude. Consequently we must expand the content of the *transcendental ego cogito*, add to it a new element, and say that every *cogito*, indeed every state of consciousness, relates itself to (*visé*) something, and that it bears in itself, as related (*visé*), as object of an intention, its respective *cogitatum*. Each *cogito* does so, moreover, in its own way. The perception of the "house"—(the inverted commas are apparently intended to indicate that the house is the intentional, not merely the actually apprehended, object of the perception)—"relates itself to a house—or, more exactly, to some individual house—in the perceptive manner; the memory of the house 'relates itself to' the house as memory; the imagination as image; a predicative judgment, having for object the house 'set there before me' relates itself to it in the manner proper to a predicative judgment; a super-added judgment of value would relate itself again in its manner, and so on. These states of consciousness are also called *intentional* states. The word *intentionality* signifies nothing else than this foundational and general character which consciousness has of being consciousness of something, of bearing, as *cogito*, its *cogitatum* in itself."

These quotations should make it clear that Husserl is not concerned to develop the notion of intentionality in a psychological reference, that is, as a feature of the relative, contingent and evanescent processes of the "real" Ego-subject's "real" experiences, experiences of the Ego in and in commerce with the world. The intentionality in which phenomenology is interested is that of pure consciousness, absolute, indubitable and self-contained, which would remain even though all "realities" ceased to be.

Consideration of Husserl's distinction between immanence and transcendence may throw some light on the problem which we have been seeking to define. Transcendence is of different kinds or rather it has different specific forms. Speaking generally, Being is transcendent which is other than the Being of Consciousness though declaring itself to consciousness. We may allow Husserl to state the distinction in question in his own words: "*Under acts immanently directed, or, to put it more generally, under intentional experiences immanently related, we include those acts which are essentially so constituted that their intentional objects, when these exist at all, belong to the same stream of experience as themselves.* We have an instance of this whenever an act is related to an act a *cogitatio* to a *cogitatio*) of the same Ego, or likewise an act to a given sensible affect of the same Ego, and so forth. Consciousness and its object build up an individual unity purely set up through experiences. Intentional experiences for which this does not hold good are transcendentally directed, as, for example, all acts directed towards essences, or towards the intentional experiences of other Egos with other experience-streams; likewise all acts directed upon things, upon realities generally." We shall confine ourselves to the transcendence of 'real' things to the acts directed upon them. Any thing perceived is transcendent to the perception of it. *Dinge sind dem tätigen Leben ursprünglich ichfremd vorgegeben, von aussen her gegeben.* The thing is that of which in the act of perceiving we are conscious as one and self-identical within the continuous and ordered flow of perceptual patterns, perspective variations, as they pass off the one into the other. Husserl gives the example of the perception of a table. Keeping this table steadily in view as I go round it, I have continually the consciousness of the bodily presence out there of this one and the self-same table, which, in itself, remains unchanged throughout. But the perception of the table is one that changes continuously, it is a continuum of changing perceptions. "The perceived thing in general, and all its parts,

aspects and phases, whether the quality be primary or secondary, are necessarily transcendent to the perception, and on the same grounds everywhere. The colour of the thing seen is not in principle a real phase of the consciousness of colour; it appears, but even while it is appearing the appearance can and *must* be continually changing, as experience shows. The *same* colour appears 'in' continuously varying patterns of *perspective colour variations*. Similarly for every sensory quality and for every spatial shape" (Ideas, pp. 130-1). A thing, then, is transcendent to the perception of it in the sense that it can exhibit itself in actual experiences only through a never-ending series of perspective variations, which are yet ordered or unitary because the ways of appearing through these variations are also ways of the thing's self-revealing, self-manifesting, self-exhibiting. A thing is the intentional correlate of the act of perceiving, thus intentional object. As intentional object, it is transcendent to the actual perceptions only; it is not transcendent to the pure act of which it is the intentional object. I take it that Husserl is referring to this immanence of the intentional object in the pure act when he argues that the perception of things "presents and apprehends a Self in its bodily presence", and that it does this "in accordance with the apprehended object's *own meaning*". The essential nature of the perception of things is to be "a perception that works through perspectives; and correlatively, it belongs to the meaning of its intentional object, of the thing *as* given within it, to be perceivable, in principle, only through perceptions of such a kind, perceptions that imply perspectives". (Ideas, p. 137.)

What holds of things perceived holds likewise, in principle, of things thought by the scientific reason. The thing named physical Nature is the intentional object of logically determining thought, but there is no break between perception and such thought, and no dualism of intentional objects. In physical method the perceived thing is always, and in principle, the thing which the physicist studies and scientifically determines. "In principle, a thing, the precise thing of which the physicist speaks, can be given only sensorily, in sensory ways of appearance, and it is the identical element which appears in the shifting continuity of these ways of appearance which the physicist in relation to all experienceable (thus perceived or perceivable) systems which can come under consideration as "conditioning circumstances", subjects to a causal analysis, to an enquiry into real necessary connections. The thing which



he observes, with which he experiments, which he sees continually, handles, places on the scales, "brings to the fusing furnace", this and no other thing is the subject of physical predicates, since it is it that has the weight, mass, temperature, electrical resistance, and so forth. So, too, it is the perceived processes and connections themselves which are defined through concepts such as force, acceleration, energy, atom, ion, and so forth". (Ideas, pp. 160-1.) Just as at the perceptual level the thought of thing (in Husserl's terminology, thing as intentional unity of sensory meanings, as intentional object of perceptual consciousness) functions in the way of giving unity to the perceptual experiences on their object side, so the thought of physical thing (thing as intentional unity of logically determined meanings, intentional correlate of scientific consciousness) functions as the unifying factor of all scientific theories.

Though transcendent, both perceptual and physical thing are constituted within consciousness and remain fettered to consciousness. There is no place in Husserl's thought for the familiar doctrine of the thing in itself. He implicitly and explicitly disavows this doctrine. In the *Méditations*, for example, he writes: "Every species of existence, including all existence characterised—in whatever sense—as 'transcendent' has its own constitution (within consciousness). Every form of transcendence is an existential sense constituted at the interior of the Ego. All sense and all imaginable being, whether they be called immanent or transcendent, are part of the domain of transcendental subjectivity, inasmuch as this constitutes all sense and all being. To wish to seize the universe of true Being as something which is to be outside the universe of consciousness, of knowledge, to suppose that Being and Consciousness are related the one to the other in a purely external way, in virtue of a rigid law, is absurd. They belong essentially the one to the other, and what is essentially linked is concretely *one*, one in the unique and absolute concreteness of transcendental subjectivity" (pp. 70-1). (See also, and especially *Formale und Transcendentale Logik*, pp. 205-8.)

From transcendent being, that is, Being which manifests itself in (better, to, or for) consciousness, Husserl distinguishes Being as Consciousness. The perception, or intuition, or consciousness of Consciousness is immanent perception. "In the case of an immanent perception, perception and perceived essentially constitute an unmediated unity, that of a single concrete cogitatio." We perceive the transcendent through the medium of its appearances, the thing, for example, through

the manifestation, through prefigured patterns, of its determinate qualities which in any given case are "real" and strictly "fall within" the perception (the "real" experience). On the contrary, "an experience has no perspectives. . . . When referring to that which has being in this region, anything of the nature of 'appearing', or self-revealing through perspective variations has simply no meaning". (Ideas, p. 136. See also p. 139.) Being as Consciousness, not the "real" consciousness of a self-identical "real" ego-subject which declares itself through its states and thus shares in a quite distinctive kind of transcendence, but Consciousness in its purity as transcendental subjectivity is essentially self-transparent, immanent in essential intuition. Husserl's phenomenology rests on the possibility of such intuition. It claims to be the systematic exploration of that realm of Consciousness which exists in entire independence of transcendent being. The method which is to serve as guide to such intuition of essence (*Wesensschau*) will form the subject of a second article.

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## REVIEWS.

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THE PRIMARY SCHOOL CURRICULUM IN AUSTRALIA. Edited by Percival R. Cole, M.A., Ph.D., F.C.P. Published by the Melbourne University Press. 310 + xiv pages. Price: 10s.

This book has been produced, under the auspices of the Australian Council for Educational Research, by a representative committee of educationists drawn from each State. Each author is responsible for that part of the report which bears his name. The bringing together of leaders of educational thought in the consideration of a subject that is wide enough to permit of such subdivision undoubtedly represents the Council's most ambitious project to date, and for thoroughness and comprehensiveness the book is probably unsurpassed by any previous review of Australian educational theory and practice.

There is, of course, an unavoidable amount of overlapping in the various chapters. This is, however, by no means a defect, for it enables the reader to distinguish, by the points of agreement and disagreement, between statements that have general acceptance and those that are matters of contention. For instance, all are agreed that the school must cater for individual differences in pupils, and that, to allow for this, the curriculum must be flexible. There is also general agreement that the curriculum should be governed by "two fundamental considerations, namely, the development of the individual and the needs of society", but there is no such unanimity as to which of these considerations should be stressed in the primary school. Again, it is stated in some chapters that only the bare outlines of the curriculum should be prescribed by the central authority; the reader is apt to generalise from this agreement until he encounters a chapter in which are eulogised specimen courses that could hardly be given in greater detail.

The first six or seven chapters of the Report deal with general matters relating to the curriculum and to the way in which it is carried out in the schools, such as the philosophy and general aims of education; the influence on the curriculum of the University, of the business world, of politics and domination by the political head of the department; the influence for good and evil of a centralised system, such as obtains in Australia; the effects of the inspection system, coupled with the rating of teachers; the effects of examinations in limiting instruction in the various subjects to those sections and aspects which can be more readily tested.

Another limiting influence, perhaps not given its full due of abuse in the Report, is that of the snippet textbook—particularly in such subjects as history and geography—"prepared to meet the requirements of the course", which generally means boiled down to the irreducible minimum in order to make it so cheap that forty copies may be bought by the forty members of a class. To bring an old rhyme up to date:

"Twenty froggies went to school Down beside a rushy pool,

Twenty little books by 'Ped', Twenty books by 'Blank, Dip. Ed.'"

There is general agreement in the Report that there is a need for new methods of instruction that will give pupils not mere knowledge, but greater initiative and self-confidence and will "teach them to think". But we learn from a quoted passage in one chapter that these were exactly the aims of the "new" courses introduced about 1905, and that in these respects the schools prior to that date had failed. In the educational world one expects a new perfection to tread on the heels of the old, but it is rather confusing to find that the glorious young Apollo uses the battle-cry of the old gods. Will the new methods of to-day likewise become formal, and will knowledge come but wisdom linger? It is the opinion of the writer of this review that the Report, through focussing attention on the curriculum and its attendant problems, should do much to prevent a repetition of past mistakes.

The worth of the education provided in any country or in any school cannot be estimated merely by reference to curricula; to do this is like judging the riches of a mine by referring to the prospectus instead of to the warden's report. Several of the writers stress the effect that the teacher's ability, outlook and culture have in determining how far the aims of the curriculum will be achieved. Special care is therefore advocated in the selection and training of teachers. As comparatively few teachers are admitted to the service each year, it follows that the term "training" must include not only preparatory courses but refresher classes, study and discussion groups, and so on.

So far we have dealt with little more than the first half of the book. In a subsequent chapter are compared the curricula of the various Australian States; another chapter is devoted to a study of time-tables, time-allotment, and order of lessons, together with a suggestion of practical guiding principles. This portion of the Report reveals a general similarity between the Australian States, and also a considerable difference in the time-allotment of various schools in the same State and a departure from that recommended by the central authority. These differences are hardly in keeping with the oft-repeated criticism of a "stereotyped" centralised system.

Another chapter deals with the material aids usually employed in schools. In another is outlined a suggested procedure for a revision of the curriculum by committees of teachers and administrators, assisted by study groups of teachers organised throughout the State. The concluding chapter, appropriately enough, considers the question



of educational measurement. To obviate the evils of the older form of examination, a combination of tests is recommended—frequent internal examinations, standardised and diagnostic tests, “new-type examinations” as described by Ballard, and intelligence tests. An account follows of what is being done in Australia in the preparation and standardisation of tests.

For the masterly handling of the subject and the review and appraisal of Australian educational practice, the whole book merits careful consideration by members of the teaching profession and others interested in education. It should exert a very definite influence on future developments in the primary schools.

J. R. LYALL.

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THE PHYSICAL MECHANISM OF THE HUMAN MIND. A. C. Douglas. Edinburgh, E. and S. Livingstone; 1932. Price: 15s. net.

Apart from technical manuals of brain anatomy, there were previously no textbooks from which the layman might study the development of “levels” of intellect correlated with those of neurology. Mr. Douglas comes to the aid of the psychologist in presenting a theoretical description of the operation of these various levels which is without a single reference to any of the acknowledged tracts of the central nervous system. In the main this may be considered an advantage by the well-equipped student, eager to study sheer function rather than to learn the essential of anatomical structure. On the other hand, the omission of the mention of all brain tracts leaves the work somewhat incomplete for beginners. Probably the advantages of this omission in making for clarity outweigh its disadvantages.

Beginning with cellular function and what he might well have described as the development of “polarity” and the principle of the “axial gradient”, the author describes the possibilities of nerve function and the theoretical development of voluntary and automatic systems and their interplay of operation. He relies upon the theory of “chronaxies” as a basis for selection of right nerve paths. In the case of spinal reflexes, he is careful to point the “mechanism of reciprocal stimulation and inhibition of reflexes”, which is here developed and afterwards applied in his theory of cerebral activity.

In proceeding to the discussion of cortical action, he makes an excellent point by correlating the selective activity of attention with stimulation of one “centre” and the mutual inhibition of others by operation of external stimuli. He coins a special term, “senglia”, for the “acquired” cortical “sensation-spots which represent the psycho-neural units of mind”. The problems of time and space are dealt with from strictly neural aspects, the former by means of the accepted kinæsthetic sense, the latter from the experimental work of Muensterberg as applied to the radiation of rhythmic action proceeding from respiration, and the neural processes, or “mechanisms” as the author prefers to style them, are further related to habit, memory, perception and association. Speech is regarded as an auditory, visual or motor mechanism which affords an alternative to the practical and real situation.

There is probably no psychologist either behaviourist or mentalistic in outlook who would not appreciate this writer’s clear and daring attempt to correlate the neural and mental aspects of the problem of thinking, as well as mental functions in general. The behaviourist alone, however, would accept his final conclusions that, by thus “reducing” the mental aspects to neural mechanisms, those again may be simplified to mathematical formulæ. Possibly even Mr. Douglas

himself would admit some difficulty in treating a neurotic patient by manipulating such formulæ isolated from the realities of the situation. The only point in which we join issue with him is, of course, the outstanding matter of disagreement between behaviourists and other psychologists who are more catholic in their outlook. Arguments for and against are of too lengthy a nature to discuss here. Apart from this aspect, however, the book shows a great advance on other treatments of the correlation of psychological and nervous functions. No psychologist can afford to ignore many new points of theory which are here advanced. If behaviouristic writers can contribute such books as this, they must find an acceptance not only among those of their own creed, but by all psychologists, no matter what their tenets.

A. H. MARTIN.

*I FONDAMENTI METAFISICI DELLA MORALE DI SENECA.* By Marino Gentile. Publications of the Catholic University of the Sacred Heart, Philosophical Series, Vol. XX. Milan, 1932. Price: 10 lire.

Seneca is without doubt a complex personality—such a personality as we can only view in fractions and understand as a whole by piecing our fractional knowledge together. The historian is apt to consider him mostly from the point of view of his influence over his imperial pupil, Nero; the classical student will be tempted to stop at the rhetorical splendour of his Silver Latin; even the philosopher is likely to lose some of his professional interest by reason of the glamour of the Cordovan's oratorical manner. There is a certain amount of truth in the remark of a German critic that in Seneca "*der Sieg des Stils über die Weltanschauung*" is strikingly apparent. No reader, however, will fail to discern the moral elevation of the essays and letters of this Hispano-Roman Stoic. There are even occasional approximations to the ethics of the Gospel. The forged correspondence between the Philosopher from Cordova and the Apostle from Tarsus is not the sole explanation of the former's popularity amongst Christians of early and mediaeval times. They read Seneca because they recognised that they had in his treatises some of the best pages of the eminently respectable philosophy of the Porch. It would be a very interesting task to estimate even roughly how much of the moral phraseology of Stoicism is still heard from the Christian pulpit of to-day.

Interest in Seneca, the stylist and the moralist, is likely to be so keen and exclusive that few readers would think of collecting the scattered passages that give an insight into the metaphysical presuppositions of the philosopher's ethical system. It is because of its real helpfulness towards the study of this easily negligible side of Seneca's thought that we welcome the volume before us. If it had no merit beyond that of an anthology it would be worth while, but as a matter of fact it is an orderly and, it would seem, rather thorough investigation of the passages that reveal the object of search.

We have, however, one fault to find with the book. The results of the author's endeavour to reveal the central nucleus of the Senecan philosophy are not very easily discernible. The conclusions are not made to stand out in bold relief. This is rather a pity, because the mass of primary texts examined in the course of the author's exposition and the equally imposing array of secondary texts cited or referred to in the footnotes indicate an admirable patient study of the sources. The defect mentioned makes it difficult for a reviewer to sum up the points of the book, but with the help of pencil-marks made while reading its pages, we may draw attention to the following things as

salient. They do not, however, pretend to even a barely substantial completeness.

The author is careful to note in his first chapter that Seneca's philosophy is so purely practical as to make any treatment of his Metaphysics a matter of studying the ideology that presides over the philosopher's investigation of what man owes to Nature and what relations bind him to the Cosmic Principle. That Seneca was a Stoic is too clear to need proof. Like many another Roman, he had a temperamental affinity with the system of Zeno and Chrysippus. As a Stoic he did not profess any special interest in metaphysical speculation, but every philosopher is so tormented with the desire of unity that even a professedly materialistic system of ethics cannot completely live out of the domain of the supersensible and the transcendental. Even *a priori* we may be sure that inquiry into the metaphysical conceptions of so acute a mind as Seneca's will not prove fruitless.

His Cosmology does not seem to be notably different from that of Chrysippus. Active cause and passive matter are the constituents of an animate world. The spirit described as "*aer agitatus*" is found even in rocks. That sounds like thorough-going hylozoism. The Roman philosopher touches lightly on such a characteristic Stoic idea as pneumatic tension. It is rather supposed than spoken about. The fiery breath that makes the cosmic soul is identified with God; the stellar spirits are apparently first in the scale of pneumatic relaxation and the human spirit second. The soul of man is described as "*tenuior spiritus*". All-round animation implies universal cosmic rationality. Reason or intelligence permeates and governs the whole universe. The consequent Stoical idea of a Cosmic Society, which evoked Stoic philanthropy and cosmopolitanism, leaves in Seneca's Roman Stoicism plenty of room for all the special relations of domestic and civic fraternity. Even Nero is addressed—sincerely, it would seem—as the soul of the Roman State.

Like later Stoics generally, Seneca allowed for more ordinary standards of morality, such as would be followed by those who could not aspire to be sages. In fact, his originality as a thinker seems to derive from his sympathy with human weakness. Not only did he realise that the sage was called upon to exercise therapeutic functions in a morally-diseased world, but he had an almost Pauline idea of the moral dualism existing in man. In view of this it is not surprising to find texts that reveal him as no strict adherent of Chrysippian Monism. His psychology prevented him from holding in more than a partial way to the existence of a unique all-pervading rational force. Most historians hold that Stoic philosophers were systematic pantheists, but Seneca apparently was a theist. As to whether he considered the individual human soul as immortal there is very considerable doubt. It is not easy to know what he meant by such a sentence as this: "*Dies iste, quem tamquam extremum reformidas, aeterni natalis est.*"

The author was probably wise in not trying to fix Seneca's position in relation to the whole interesting history of Stoicism. Much as we may regret the consequent dryness of his study, its character as a piece of specialistic work would be seriously compromised by back references to the three stages of progress made during the four centuries of life which the Stoa had run. An inquiry into the higher thoughts of even one illustrious disciple of Zeno is heartily welcome, for of all the post-Socratic schools this one stands out as the noblest. Many of the sublime ethical conceptions of the Gospel lost nothing in



being translated into its language. Some of St. Paul's ways of saying things remind us at times that the Tarsus which he gloried in as "no mean city" was one of the university towns of Stoicism.

W. LEONARD.

**ECONOMY AND TECHNIQUE OF LEARNING.** Wm. F. Book. Heath and Co., New York and London, 1932. Price 10s. 6d. net.

The problem of cerebral function is one that is of peculiar interest to students of human psychology, since the possibilities of the acquisition and extension of human culture, which is totally dependent upon it, are of direct importance in relation to the needs of human society. These two aspects find expression in studies of learning and the thought processes. The former factor, learning, concerning which much is known from the results of experimental procedure, is treated by the author in this work. On the other hand, so far as the thought processes, generally "misdescribed" as rational, affect learning, an adequate treatment is here afforded by him. The book is written primarily for teachers; in this country its main interest will be for those engaged in the study of formal psychology, for it is safe to assert that unfortunately few Australian teachers will be so adequately equipped by previous preparation and reading to appreciate and apply the principles expounded therein; its chief appreciation will be with the psychologist.

The first section of the work is genetic in treatment, covering the principles of "when and why learning occurs". Learning is considered as the necessity of securing an adjustment to the environment, according to the intellectual development and possibilities of the organism. "Biologically and fundamentally considered, learning is a process by means of which these selections and changes in the stimulating situations are made." Proceeding to the human level, the problem of urge or motivation is next considered, and is developed from an organic to an instinctive level, though the author cautiously refrains from advocating any regular classification of the "so-called instincts". The realisation of a "conscious purpose or plan" is the final and most fully developed phase. Here copious references are made to the author's previous work, "The Psychology of Skill", and extended quotations from this work are included in the text. It may be pointed out here that the problems of motivation are treated in a fairly general fashion, rather than with a view to specific conditions; possibly it may have been advisedly left to the teacher to make specific educational applications; at the same time unless he has previously gained considerable experience in practical teaching and is possessed of a fairly wide reading and first-hand knowledge of child psychology, the treatment is vague and unsatisfying.

As basic units of learning, the author utilises the methods of "negative adaptation", "positive adaptation" and the "substitute stimulus and response", the last generally designated after Pavlov as the "conditioned reflex". By applying these units to changes in the original form of response as well as the stimulus, the author builds up "six elements" which he designates by the first six letters of the alphabet. Then follows an application of these elements to various situations involving learning, even to the level of "creative learning", where intellectual factors are chiefly operative.

Professor Book proves his claims to being no behaviourist, for he designates various physiological, perceptual and ideational levels. As

he points out, however, researches upon the level of thought processes are by no means as complete as is desirable. Here learning as such emerges into the process of problem solution.

As a means towards economy of learning the development of interest is laid down as an essential. Above all, he advocates a belief by the individual in his own capacity for assimilation; naturally individual abilities differ, and due allowance must be made for this. On the other hand, objective conditions such as light, temperature and ventilation, and even more important factors, the attitude of the school and parents are of moment. Fatigue when induced by physical factors and boredom requires special understanding, and this subject is given special treatment.

One of the best treated aspects now follows, *viz.*, the arousing of a clear knowledge of the goal idea and of the arousing of emulation in the student of a desire for self-improvement by clear knowledge of progress and as a further help clear insight into what is required as a guide. The final chapter consists of a condensed but clear and careful summary of the whole of the previous chapters.

As stated in the introduction, the book is rather one for the advanced student with a sound psychological training rather than for the average teacher.

The work introduces no novel features, but is a sound and thorough text covering an exposition of the fundamental psychological factors and aspects of learning. It should be found on the bookshelves of every psychological library and constitutes one of the necessary books of the teacher of psychology and advanced students in this subject.

A. H. MARTIN.

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TALENTS AND TEMPERAMENTS. Angus Macrae, M.A., M.B. Nisbet, London, and the Cambridge University Press, 1932.

This book has as its sub-title "The Psychology of Vocational Guidance", which describes its purpose. It has been mainly written "to serve a growing body of inquirers—teachers, social workers and parents". It is somewhat a pity that for practising psychologists the work describes the main aspects so very briefly and gives no samples of tests used. On the other hand, it treats extensively the problems that arise from all possible angles, and practising psychologists may well utilise their own standardised tests for their local work. Among other sources of information the part of a medical examination has been carefully set out as well as the possibility and methods of utilising school estimates. The latest results of vocational guidance work as compared with individuals who were either not guided or who did not follow the type of occupation suggested by the vocational psychologists concerned are clearly set forth. Nor are Australian conditions ignored in the brief review of work carried on outside Britain. The book combines the rare merit of cheapness in price with an excellence previously not found in other works dealing with the psychological practice of vocational guidance. Particularly to the student interested in mental tests as well as to those desirous of enlightenment in the subject, the book should be warmly welcome. It stands out as the best summary up to the present of the best and most recent aspects of the work of British psychologists.

A. H. MARTIN.



## CORRESPONDENCE.

TO THE EDITOR.

Dear Sir,

When I read Dr. R. C. Bald's somewhat condescending review of my book, "The Psychology of Literary Appreciation", which appeared in last December's issue of this Journal, I perceived at once that the criticism was too severe, for the reviewer's opinion that the book would please no one had before that time been disproved. On lately re-reading the review among others of a different tone it struck me that your readers might be interested in some of the issues raised.

Apart from the passage where Dr. Bald, from Olympian heights, scolds the author's ignorance and the defective judgment of the executive of the Australian Council for Educational Research, his criticism falls under four headings: First, the psychology of the book is "not so much *a* psychology as a series of scraps from several psychologies". Second, terms such as "imagination" are used in a wide sense ("loosely"), whereas I. A. Richards defines six uses of the word. Third, the author is unable adequately to explain the difference between good and bad literature. Fourth, the author appears to be unaware of several good books which stress this difference.

Now a good case could be made out for an eclectic psychology such as Dr. Bald attacks. There may be some value for literary appreciation in discovering how it is illumined by the psychology of different schools of thought; and, more generally, there is probably a subject "psychology", apart from those partial and somewhat polemical studies, each of which might be called "*a* psychology". Again, one might defend the use of a word like "imagination" to include the whole "activity of the mind in image-making", preferring such a use to splitting the meaning, confining the word to one of these technical meanings, and presumably coining new words for the other meanings.

It is not, however, with these subjects that I am chiefly concerned, but with my "inability to give any adequate explanation of the differences between good and bad literature". The bulk of the review is occupied with showing how valuable it is to make this distinction, and with condemning my book because it does not do so. Granting the great value of the distinction, are there not many aspects of literary appreciation other than the distinguishing of relative values? Although a reading of chapter VI would reveal that the distinction has not been neglected, it is true that "The Psychology of Literary Appreciation" does not stress this aspect. (Whether the author is *unable* to do so is, of course, a point on which no reviewer can dogmatise.) One of the reasons for the slight treatment was that, as Dr. Bald himself shows, this aspect has been realised and discussed for over a hundred years, and it seemed more worth while to attempt to correlate many aspects of the psychology of literary appreciation than to concentrate upon the one aspect most frequently treated. The reviewer, in fact, appears to violate one of the elementary canons of criticism, namely, that a work should be judged with reference to its aim, not by reference to some different aim which the reviewer thinks more desirable.

Any reading of "The Psychology of Literary Appreciation" other than a very superficial one should also disabuse the reviewer's mind of the opinion that the author regards day-dreaming, literary creation and literary appreciation as "mere extensions" of the dream state. Though the analogy between dream and imaginative appreciation has been dwelt upon, no word stronger than "analogy" has ever been used.



Again, as before, the distinction was summarised but not stressed because it was irrelevant to the author's purpose; while a study of the *likeness* between these imaginative phenomena was pursued as being definitely illuminating.

There are more of the reviewer's statements which call for comment, but since they are not of general interest I will conclude by a summary. The reviewer's ideal book of this title would certainly have gone over trodden ground, concentrating upon those aspects of the subject admittedly well treated by several recent volumes. The author's method was to base his work on his own experience—an intense and catholic appreciation of all types of literature, whether these have received the stamp of august approval or not—and to bring to that study what light he could from his reading in psychology. Whether that reading was wide enough is a matter of opinion. None of us has read as widely as could be desired; but that such gaps are so great as to "rob the work of any real value" has been disproved in a most gratifying way by the appreciation of many men whose opinion is worth having.

East Kew,  
Victoria,  
10th June, 1933.

I am, sir,  
Yours, etc.,  
D. C. GRIFFITHS.

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## BOOKS RECEIVED.

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**THE PLACE OF MINDS IN THE WORLD.** By Sir William Mitchell, K.C.M.G. Gifford Lectures delivered in the University of Aberdeen, 1924-1926. London: Macmillan & Co.; 1933. Price: 12s. 6d. net.

**CAUSALITY.** A Law of Nature or a Maxim of the Naturalist. By L. Silberstein. London: Macmillan & Co., 1933. Price: 4s. 6d. net.

**THE PSYCHOLOGY OF LAUGHTER.** A study in Social Adaptation. By Ralph Piddington. London: The Figurehead Press; 1933. Price: 10s. 6d.

**ORIGINS OF SACRIFICE.** A Study in Comparative Religion. By E. O. James. London: John Murray. Price: 10s. 6d. net.

**PSYCHOLOGICAL TESTS, METHODS AND RESULTS.** By Henry E. Garrett and M. R. Schneek. New York: Harper & Brothers; 1933. Price: \$2.75.

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## JOURNALS RECEIVED.

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**PHILOSOPHY.** Macmillan & Co. Published quarterly. Annual subscription: 14s.

Vol. VIII. No. 31. July, 1933. Great Thinkers. I—Socrates: R. Hackforth. Two Philosophers of the Oxford Movement: Clement C. J. Webb. Croce's Theory of Economic Action: W. G. de Burgh. The Sense of the Horizon: C. Delisle Burns. A Pluralistic View of History: Adrian Coates. Professor Whitehead's *Adventures of Ideas*: Sydney E. Hooper.

**MIND.** A Quarterly Review of Psychology and Philosophy. Macmillan & Co. Yearly subscription: 16s.

Vol. XLII. No. 167. Mr. Stace on the Construction of the External World: H. H. Price. Professor Hallett's *Æternitas* (II): C. D. Broad. Aristotle's Doctrine of Substance: D. R. Cousin. Mr. Joseph's Defence of Free-Thinking in Logistics: L. S. Stebbing.

**JOURNAL OF PHILOSOPHY.** Published fortnightly. Columbia University. Subscription: \$4 a year.

Vol. XXX. No. 8. The Obvious in Esthetics (I): Wendell T. Bush. On the Nature of Meaning: Frederick Anderson. No. 9, April 27. The Obvious in Esthetics (II): Wendell T. Bush. Mathematical Logic in Modern Positivism: M. Whitcomb Hess. No. 10, May 11. The *A Priori*: D. W. Gotshalk. The Fallacy of Unipolar Explanation: W. H. Roberts. No. 11, May 25. Indeterminism and the Concept of Physical Reality: V. F. Lenzen. The Metaphysical and the Logical Individual: Paul Weiss. Material Truth in Rational Thinking: K. E. Rosinger. No. 12, June 8. Perceptual and Memory Perspectives: E. B. McGilvary. No. 13, June 22. Concerning Platonic Esthetics: Gustav Mueller. The Problem of Knowledge: Arnold H. Kamiat. No. 14, July 6. Charles Peirce's Guesses at the Riddle.

**CHARACTER AND PERSONALITY.** An International Quarterly for Psychodiagnostics and Allied Studies. London: George Allen & Unwin. Annual subscription: 7s. 6d., post free.

Vol. I. No. 1, September, 1932. Of the Words Character and Personality: William McDougall. The Years of Puberty in a Public School: Robert Saudek. Familial Trends in Personality: June E. Downey. Sigmund Freud in his Historical Setting: C. J. Jung. Typology in the Light of the Theory of Conditioned Reflexes: J. S. Rosenthal. The Functioning of Memory and the Methods of Mathematical Prodigies: B. Sandor. An Art Expert's Observation on Personality: Max I. Friedlander. Abstracts from England, Germany, and Russia.

This journal deals with a subject which has now become very prominent, and it will be eagerly welcomed, not only because of the wide range and usefulness of the articles, but because of the long list of collaborators and the many countries represented.

**JOURNAL OF SOCIAL PSYCHOLOGY.** Clark University Press. Annual Subscription: \$7.

Vol. IV. No. 2, May, 1933. Annoyance and Behaviour: H. Cason and A. Chalk. Humor and its Relation to Other Personality Traits: C. Landis and J. W. H. Ross. The Comparative Susceptibility of Three Age Levels to the Suggestion of Group *versus* Expert Opinion: Clare H. Marple. The Personality and Emotions of Men: E. G. Fleming. Group Predictions of Future Events: Nathan Israeli.

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## NOTES AND NEWS.

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The two series of lectures, one in Melbourne and one in Sydney, held in May and June instead of the usual annual congress, were so successful that the Journal will benefit beyond expectations. Especially in Melbourne did the lectures attract public attention. The audience at the first lecture there was about 550. About the same number attended the second lecture, while for the third it was necessary to broadcast to an overflow audience in another place. This astonishing success, combined with capable organisation, resulted in the large profit of nearly £100. One congratulates heartily our Melbourne colleagues on this success, and the Editor thanks personally all those who had to do with the organisation of the series.